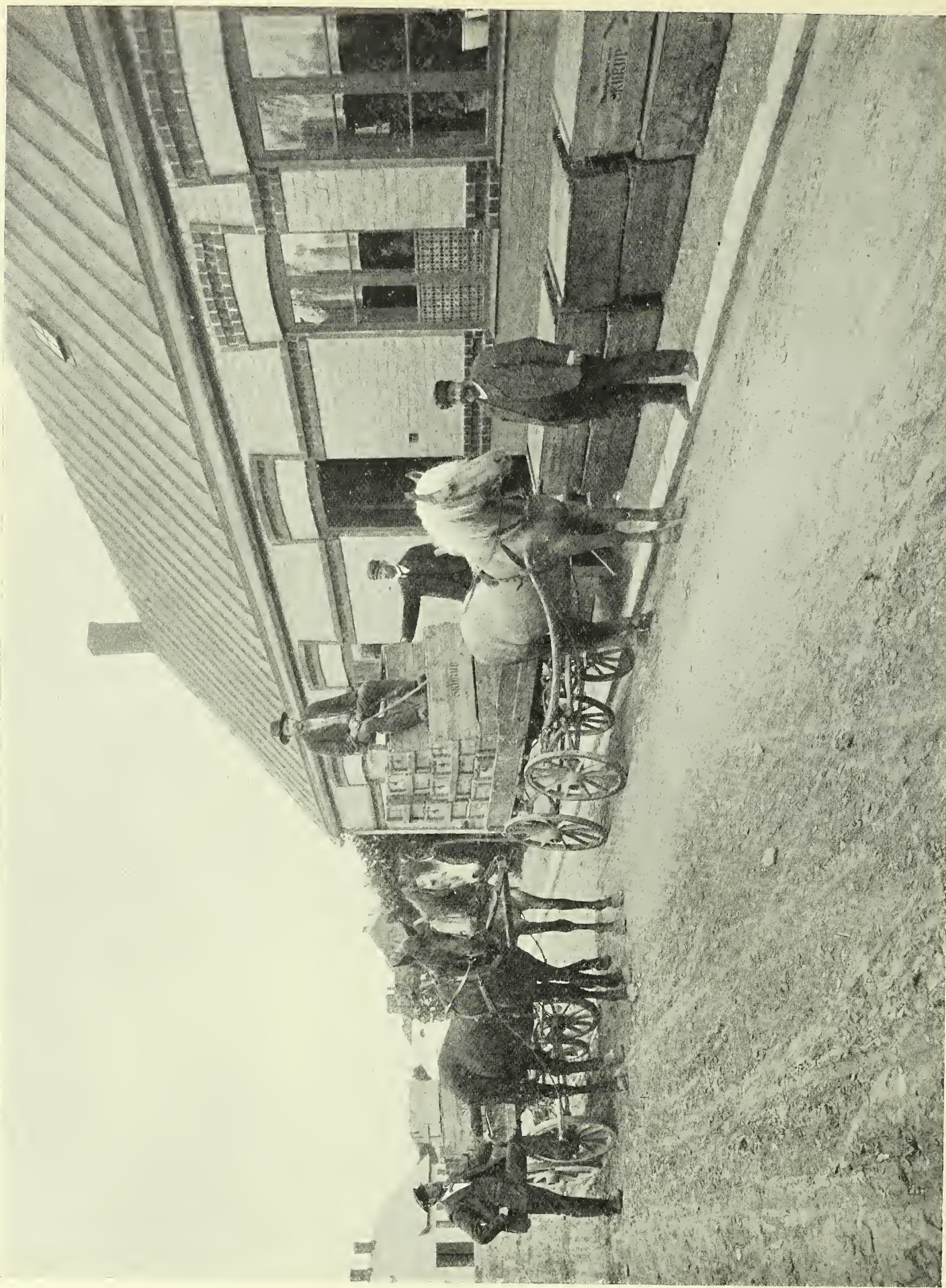


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**A SCANDINAVIAN EGG-PACKING STATION.**

In nearly every village throughout Denmark and Sweden there is an egg-collecting depot, from whence the eggs are despatched to a central station, there to be sent to Great Britain. The above photograph was taken at Skurup, Sweden, the centre of a large egg producing district. (*Copyright*).



# THE ILLUSTRATED POULTRY RECORD



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## DIARY OF THE MONTH.

### EDITORIAL NOTICES.

Telegrams : "VIVACIDAD." Telephone : CITY, 2083.

*The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs or sketches, and publication in the ILLUSTRATED POULTRY RECORD can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.*

*The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.*

*The Annual subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the ILLUSTRATED POULTRY RECORD.*

**The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor.**

**The latest date for receiving advertisements is the 20th of the month preceeding date of issue.**

**The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the Editor,**

### The International Meetings.

The fact that we must go to press early precludes the possibility of our attempting anything like a complete account of the proceedings or of including in our present issue particulars of all the various functions to which the press had access. We attempt in this issue, as in the last, to recognise the importance of this gathering by giving special prominence to international questions. Among other points, it will be seen that Mr. Edward Brown's presidential address is given verbatim, as it is the key-note to the whole. By reason of the connexion between the Editor of the *Illustrated Poultry Record* and the International President no comment is made upon that address, this being left to others. The interest manifested in these meetings has been very great indeed. Those present realised the seriousness and constructive importance of their work. When an account has been published of what has been decided upon, it will, we trust, prove that a new epoch has been opened in the poultry industry. The meeting together of men of different nationalities uniting in the promotion of one pursuit cannot but be beneficial, here as elsewhere, and the more there is of such interchange of ideas and experiences the better it will be. We venture to think that those who have come to our shores will have returned with an exalted opinion of the force of British poultry-keepers, as well as with a sense of appreciation of the hospitalities extended to them. We have asked some of these to give expression to their impressions in later issues.



### Home Influence.

Whilst the International meetings may be expected to have great influence in all lands, we may reasonably expect that they will have a stimulative effect in the United Kingdom, where we have been seriously behindhand in poultry teaching and research. These gatherings have taken place at the most opportune time. Whether that is by accident or design cannot be stated. Such, however, is the fact. Our columns have abundantly shown the gross neglect of poultry keeping by public bodies and institutions in England and Wales, County councils, and agricultural colleges, to whom in the past has been committed the duty of providing for the needs educationally and investigationally of our people. That there is a stirring among the dry bones is evident, but whether this is to be permanent or transitory will depend to a very large extent upon those to whom the poultry industry means so much giving emphatic voice to the demand for a sufficient share of that financial support which, happily, is now available by means of the development fund. Unless strenuous action is taken, those who look with suspicion upon and are antagonistic to poultry will use their great influence and continue the old system. In this respect Ireland has shown abundantly that expenditure upon promotion and encouragement of poultry has yielded greater results than in any other pursuit. Scotland was long in the rear. Since, however, the departmental committee's report was presented three years ago considerable progress has been made, which will continue with increased momentum. Perhaps the most satisfactory feature in Ireland and Scotland is the general recognition by landowners and farmers of the national importance of this industry. Finally, we hope these meetings will have given an impetus to the movement for a National Poultry Institute, which has hung fire lately, and speedily lead to the formation of such an institution which would be a great teaching and research University, influencing development in every part and section of the country. That would be the national centre for this great work.

### A Concrete Case.

In proof of what has been stated above, may be cited a Memorandum which has just been issued by the Board of Agriculture and Fisheries, showing the advances from the Development Fund through the Board for the promotion of live stock breeding and research amounting to £49,706. So far as we are able to discern, not one cent of this will be used for poultry, save, perhaps, a small portion of the £4,000 granted to Cambridge University in connexion with the research now being conducted there. No mention, however, is made of this. It may fairly be claimed that with the exception of the case just mentioned, there is no university or college equipped for or which is sufficiently interested in poultry to make application for a grant. The truth of that is evident, and a greater justification for a National Poultry Institute cannot be made.

### Poultry Census and Production.

Synchronising with what has been referred to above has been the publication of a report respecting the poultry census taken in 1908 and the estimate of production assumed to be based thereon. In our present issue we print two articles dealing with some of the points raised. Taking the census first, it will be seen that the progress made since the previous enumeration in 1885 is satisfactory in the extreme, although much remains to be accomplished ere home production is in any sense equal to the capacity or the requirements of the country. By combining British and Irish figures, "Statistician" shows that the number of poultry increased in a little more than two decades in the United Kingdom by no less than 29,575,740, or 144.66 per cent. The greatest advance was in England, where the increase was 160.9 per cent. This, as compared with Ireland, was due to previous neglect and the greater amount of leeway to make up. On the other hand, it is evident from the article by Mr. Edward Brown that the value of eggs and poultry produced in Great Britain is seriously under-estimated, which is deeply to be regretted, as it fails to represent the importance of the poultry industry to the country at large. Over-estimating is always an economic blunder and to be deprecated, but it is equally important that something like a fair representation should be given. We need only submit an ordinary rule-of-three calculation to show the injustice of this estimate, namely, if Ireland, with 14,411,693 adult poultry and 11,936,108 young birds could, in 1908, export eggs and poultry to the value of £3,671,173, plus parcels post trade and home consumption, what would be the value of British produce, with 18,924,000 poultry and 17,804,000 young birds? The Board of Agriculture should try again.

### A Doubtful Progeny Test.

Making all due allowance for the difficulties of organising such a large undertaking as the forthcoming twelve months laying competition, and recognising the impossibility of pleasing every one—even when backed by a £500 grant from the development fund—it cannot be doubted that there will be considerable disappointment with regard to the suggestion that the progeny test is still in jeopardy. As a matter of fact, there is no very encouraging evidence of its possibility, which appears to depend upon "funds being forthcoming." Following upon the announcement of the grant and the fixing of the entry fee at the maximum previously suggested, it may reasonably be asked what other prospects exist. As they stand, the rules still confine the chief object of the competition to the determining of the best pen of birds by the value of the eggs laid, but however admirable this may be, it does not seem that the test will materially add to the educational value of other long period trials. It may, of course, be argued that a progeny test is not the best possible addition



to previous schemes, although it is so far approved as to be the only extension mentioned. However that may be, there can be no doubt that a large body of poultry-keepers hold the opinion that such a test would carry us a good step beyond the scope of ordinary competitions and could scarcely fail to add to knowledge in a very practical direction. The lengthening of the period to twelve months is an admitted advance, but whilst there may be an advantage in largely increasing the number of competing pens, it can scarcely be maintained that there are not possible benefits of greater relative importance. Without pretending to an expert knowledge of the financial side of laying competitions, the ordinary poultry-keeper may express the opinion that if a smaller number of pens would have allowed the inclusion of a progeny test the end would probably have justified the means.

farm at Euxton, near Chorley, Lancashire. Genial and urbane, the late Mr. Anthony was very highly esteemed in the Fancy, and he will be greatly missed at the leading fixtures at which he was a regular attendant, not only in England, but in Scotland and Ireland. As showing the regard in which he was held by the poultry fraternity, it may be mentioned that on the news of his death reaching the "Highland" at Cupar, those fanciers present immediately despatched a letter of condolence to his son, Mr. H. S. Anthony, who has for some time so admirably managed the Euxton Farm. He leaves a daughter and a son to mourn his loss, and to them the "Record" extends expressions of the deepest sympathy in the irreparable loss they have sustained.



**Breeding Pens on a large Poultry Establishment at Sadova, Roumelia.**

[Copyright.]

#### Death of Mr. Robert Anthony.

Early last month there passed from our midst another good man and true. On the 7th ult., Mr. Robert Anthony, who had been in failing health for many months, succumbed to heart failure. For twenty-five years or more the name of the deceased fancier has been prominent in the Fancy as a most successful breeder and exhibitor of poultry, and few there were who could send out such team of prize-winners as those "going the rounds" from his extensive poultry

#### Human and Avian Diseases.

The *Experiment Station Record* says that Mr. C. C. Bass, "for a series of years, has collected bacteria from the stools of pellagra patients and from cornmeal and bread supposed to have been the food of such patients at the time of intoxication. The cultures obtained were inoculated on sterile cornmeal and fed to chickens from 2½ to 3½ months old. One of the chickens so fed contracted a disease which symptomatically resembled pellagra (an eruptive skin disease) in man."



## INTERNATIONAL CO-ORDINATION IN THE POULTRY INDUSTRY.

By EDWARD BROWN, F.L.S.

(Presidential address to the International Association of Poultry Instructors and Investigators, London, England, July 18th, 1912).

The Meetings which are to be held during the next few days, of which this is the first, mark a new epoch in the progression of the poultry industry. Avenues of service and of labour, unknown before, are being opened on every side, and in every country. We are here to consider how these may be fully used, and how the fields to which they lead, may be effectively occupied. This is to be a council of peace, called to promote the welfare and prosperity and happiness of all the nations. In it are to be evolved means for over-coming prejudice and ignorance and in-experience wherever met with.

To some of us the progress made has indeed been remarkable. Only twenty-four years have elapsed since the first practical school of aviculture, that at Gambais, in France was established. Five years later several three weeks courses of poultry instruction were arranged at different centres in England, followed in 1894 by regular teaching at Reading College. Not until 1898 was the College poultry farm at Theale founded. About the same time the Rhode Island agricultural college at Kingston commenced instruction in this subject. Even with these pioneer exceptions the history is a brief one. The majority of teaching centres have come into being within the last ten years. The advance is, therefore, remarkable. Thousands of men and women now engaged in the development of the poultry industry in one or other direction owe their training to institutions of this class. Although research and experimental work were conducted before systematic poultry teaching was provided, it is true that the greater developments have taken place with the past dozen years. As a result we are now securing the co-operation of men of high scientific attainments, capable of dealing with the many problems presenting themselves. In my judgment, one important reason for the wonderful advance made in America, which has gone far ahead in this subject, is that there experimental work precedes instruction, and that the latter is based upon the former. What we have now to aim for is the adoption of a similar policy in all countries.

The growth of our industry as a practical pursuit in almost every part of the world during the past twenty years has been indeed phenome-

nal, in some lands more than in others. The papers which have been prepared for presentation to and consideration by this committee, from every country represented upon it, will enable us to realise for the first time what is being attempted to aid and influence that growth all over the globe. These, however, are concerned with education and investigation. They do not deal with the wider question, that of production, which in the majority of instances is much greater than records of instruction or experimental work would indicate. With one or two exceptions increased production has been the impelling force in that demand for wider and more definite knowledge which has compelled governments and other authorities to include poultry among the subjects dealt with. Such demand is resultant from rapid growth of the business, from its economic development, and from the difficulties which arise as a result of increase and extension. So long as the pursuit was not an important contributory means of livelihood, it did not matter greatly whether the hens were profitable. In only a few cases can it be claimed that Ministeries of Agriculture have led the way.

There are some nations with which this industry has occupied an important place for centuries. Among those in Europe may specially be named Belgium and France, where egg and poultry production had reached a high standard of excellence when other lands were groping in avian darkness. It may be true that there the advance made recently has not been so great as elsewhere, due, in some measure, to the higher position already attained. We may, however, fitly pay our tribute to these exemplars, acknowledging the stimulus afforded far beyond their own immediate spheres. Personally, I should desire to say that the knowledge gained in the countries named was a powerful lever in the work which has been accomplished in the United Kingdom, in combating prejudice and antagonism, and in winning for our industry the recognition it has secured. Those who are here from other countries will be able to bear the same testimony.

The question has frequently been asked, why, in the nations referred to, did poultry-keeping advance beyond that met with elsewhere? It would involve considerable time to



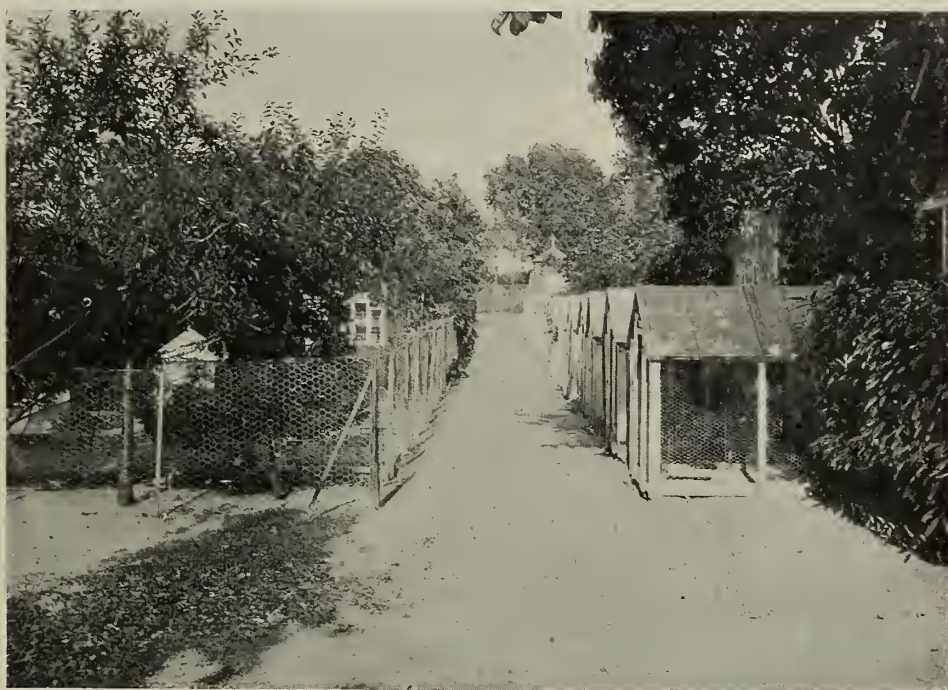
carry so interesting a study to its conclusion, and I cannot now attempt it. Only one suggestion is made, namely, whether wars and conflicts, national and international did not throw production mainly into the hands of women, who chose that which was within their scope, was capable of rapid reproduction, important as food, and yet of comparatively small cash value in case of loss. Fowls could be hidden from invading armies more easily than other stock. Recuperation in the case of larger animals requires years. In that of poultry a few months suffices.

Here may be mentioned the work of those who have for long urged the claims of poultry to a wider recognition. In this respect we may go back to the Roman days, to those of Columella and Pliny, who have had their lineal descendants in every century. There were always voices "crying in the wilderness." An Arab says that "God is with the patient if they know how to wait." Waiting has been our lot. It was not, however, until pressure came as a result of industrial and economical development, and the massing of people in great communities, together with enlargement of needs and of means, that this branch received even a mead of attention. All that was preparatory, and probably was necessary. We now see the fruits and are entering upon the heritage. Such is a further proof of what has been so well said: "The work of the morrow will largely consist of the impossible of to-day."

In every aspect of life advance from natural to what may be termed artificial conditions involves considerations and often difficulties which were unrealised or, if known, regarded as unimportant. That fact is seen in no direction more than in poultry breeding and production. With enlarged vision questions assume

a totally different phase. There is, however, a further point, namely, increase of numbers and modification of methods are themselves frequently contributory to checking attainment of the object in view, mainly by weakening the physical resistance. What would have been easily combatted under more natural conditions exercises a powerful influence. It is not until men have experienced the loss arising from abrogation of that balance which nature maintains for preservation of all organic life, that they have to confront problems, the solution of which are essential to success. We require to bring into our purview the marvellous advance of pathological knowledge which has marked recent years, to study how far genetics and mendelian theories will assist practical

poultrymen, and to enquire into the relationships of breeds to their environment. It is the business of the investigator and experimentalist to probe these questions, to discern as far as possible how the equilibrium may be restored, to discover the way of avoidance of whatever is antagonistic, to apply enlarged



**Picturesque Poultry Pens at Rueil, France.**

*[Copyright.]*

knowledge in other directions to poultry breeding, and to seek for shorter cuts to the end in view, as it is of the instructor to bring within the purview of those engaged in the pursuit the result of such enquiries together with the experience of others. Hence we recognise the importance of the poultry industry in every land of the work of instructors and investigators. In fact, without their assistance further advance would be slow, painful and costly.

The cash nexus is a powerful factor in every branch of life. One of the first results accruing from the adoption of commercial methods to live-stock breeding is an increase in the cost of production, which has ever a tendency to advance. Nor can it be otherwise. That is seen in all directions, beginning with the house in



which the fowls are accommodated, and right through the gamut of appliances, food, etc., to the final stages. Where the birds roost in any place they think fit, forage for their own sustenance, and undertake maternal duties in accordance with their instinct, even a modest return is profitable to the owner. The moment there is expenditure in all or any of the directions indicated, relative productiveness becomes of supreme importance, and, also, the reduction of

It will be evident, therefore, that the world-wide movement towards the greater knowledge and wider experience as applied to the poultry industry, which those present can claim to represent, is an evolution and based upon actual and absolute needs. Further, it tells of that marvellous growth of consumption, advancing rapidly everywhere, estimated as equal in total value to £250,000,000 per annum. This represents not a mere predeliction for finer articles of



#### ON A CALIFORNIAN OSTRICH FARM.

Contrary to the general opinion Ostrich eggs can be hatched in an incubator; in fact, on the most successful American ostrich farms, machine-hatched birds greatly predominate.

[Copyright.]

food cost, or the last state is worse than the first. It is thus that we are brought face to face with problems and questions undreamt of previously. From the fact just stated we have an explanation of the adoption of more intensive methods, in the hope that production may be enhanced far beyond the increase of cost. Alas, results are not always in accordance with desires. Not only so, but it is essential to escape from the old ruts. The doing of this, however, often leads to introduction of methods which defeat attainment of the object in view. Such has been, and must still be an impelling influence in respect to breeds and breeding, and to the quality of eggs and meat as well as the quantity.

food, or a slavish imitation of others, but is the expression of a real need. The food problem is a serious factor. Consumers have increased more rapidly than producers. Unless the balance is redressed in one way or another, mainly by greater production, the ultimate result of insufficient food supplies will become a pressing problem. With our changed conditions of life and concentration of masses of people under highly artificial conditions, these must have food high in nutritive elements, easily digested, and palatable, in which respect eggs stand first among all natural products and poultry not far behind. A further point is that an egg at any rate cannot be manipulated or adulterated, and it commands or ought to command confidence.



I submit, therefore, that instructors and investigators have a vast responsibility, an important duty, that of helping to a wider extent than ever before, in co-operation with those whose business it is to provide the food supply of civilised man wherever he may be found, by attainment of extended knowledge and application of better methods. All signs indicate that the pressure of life will increase at an accelerated pace, and that the volume of consumption of eggs and poultry in the future will only be limited by the supply.

I have brought forward these general considerations because it is essential that we shall take broad views of the questions involved, and, also, that we may justify our gathering together. The purpose we have before us is a serious one. During my journeys in many countries the courtesies and hospitalities received have been greater than it possible suitably to acknowledge. Behind all, however, is the object towards which we are striving, the welfare of men everywhere, jeopardised by advancing population of the earth unless we are able to meet the new conditions around us.

The Provisional Committee now meeting is representative of twenty-six countries. The history of some of these goes back to remote ages; in others it is comparatively modern; in more we find recent evolution. All, however, unite in the brotherhood of service. That is a great fact, an inspiration involving considerable responsibility.

Reference has been made to the wonderful developments met with everywhere. Apart from the great mass of those who are engaged in practical production we find men and women engaged in the work of aiding them, some as teachers, others as investigators, the number of whom must largely increase in the future. Our object is to bring these into close relationship, giving to each the experience of all, enlarging the power of workers by widening their knowledge and extending their outlook. In the poultry industry we recognise no frontiers, it is unlimited by nationality. We are each proud of and devoted to the country which gave us birth, whilst recognising the virtues and labours of others, desiring to know more of these so that we may be better able to exalt and extend the welfare of those among whom we labour. So much may be said, although the true lines of progression will not be found in slavish reduplication of methods adopted elsewhere, but development in accordance with our special environment and conditions. In this direction the interchange of knowledge and experience is all important. A willingness to learn from

others is essential, as is the stimulus of a friendly rivalry, in which the attainment of a greater degree of success involves no loss to others, but in turn will add to their advancement.

We have each and all, probably the older men more especially, suffered from the fact that in most countries poultry breeding and production has been despised as an economic pursuit. That has also applied to these engaged in teaching its practice. The poultry industry has been fitly termed the Cinderella of agriculture. The spirit referred to is by no means dead. To us have been thrown the crumbs from richer tables, or we have had to accept the discarded garments of sister pursuits. The place already secured has been won by determined and sustained effort. We have now to work for wider, for fuller, for complete recognition, in accomplishment of which we must prove ourselves worthy, which will alone be by enlargement of vision and of experience, by bringing to bear constructive faculties and applying science in the work to which we are devoted. Men seldom gain more than they deserve. In the long run such is realised, though it may not be individually. To that end we must forget ourselves in our object.

It is well to remember that there are only one, or at most, two other pursuits of a like nature that have an equal universality with poultry-keeping, which is within the opportunities of every class of the community, rich and poor, great and small. In this fact may be found an explanation why the numbers of those engaged in practical operations are greater than in any other branch of production. Such is a great source of strength, a promise of future development almost beyond our conception. We have but touched the possibilities in this direction. When you are reminded that in Great Britain there is less than three quarters of an adult fowl per acre of cultivated land, it will be evident that it has a capacity for a vast extension. A few countries show a better result, but generally speaking we are as advanced as the great majority of nations. The extensions such as we seek for involve, as must always be the case, risks and dangers, to meet which producers must look to those engaged in the work of instruction and investigation. We need, therefore, men of the highest attainments in both directions, to whom must be given the opportunity of fulfilling their mission, which can only be accomplished if their position in the educative and research sides is adequately recognised and supported. Some advance has already been made, but we are only at the beginning. A theologian recently said that it "would take him all night to tell the things that science does not



know." Probably it would require weeks for the scientist to do the same in every branch of knowledge and experience. There is no finality in anything. Enlargement of outlook and of knowledge combined with humility of spirit are essential factors to progression. Withal the practical aim must be kept in view. That is the ultimate issue. That the final goal. That the justification for the claims which are now made.

The genesis of the movement towards unification of poultry instructors and investigators is due to our American colleagues. Four years ago an association was formed of those engaged in poultry work at colleges and experiment stations in Canada and the United States, and we can congratulate its promoters upon leading the way in this direction. The evidence of influence exerted, of strengthening each worker by bringing him into close relationship with those engaged elsewhere, was so strong that a larger idea of an Association embracing the whole world was born, and we are here this week as a result. I may be permitted to pay a tribute to those who are doing so much for advancement of the poultry industry in North America, many of whom I know personally or by correspondence, and to say we gladly follow their lead in this direction, expressing our sincere appreciation to them for having taken the first steps, as for the great idea to which they have given birth. The response to our invitation by men of all nationalities and tongues, representing the great continents into which the globe is divided, is abundant proof that a new day has dawned. When the message came to me stating that the American Association had decided to press forward the proposal, if I was prepared to accept the leadership, and that if unable to do so it would be deferred to a more favourable time, I was startled as well as surprised, for my hope had been to be permitted to share in it as one of the rank and file. It was with extreme diffidence and considerable hesitation that I agreed to serve, if such was the general wish, feeling my own deficiencies for such a position, and overwhelmed by its responsibilities. Your vote I take as a call to duty—your duty as well as my own. The honour you have paid me is indeed great. No words of mine could fitly express the thoughts that fill my mind. Whatever is within my strength, and time, and opportunity is at your command, if and how far you are prepared to afford that support and unity of action, without which all will be vain. One thing can be claimed, that, having devoted my life to the advocacy of the poultry industry, I have endeavoured to the best of my ability to promote it everywhere. The doing so has not brought me wealth or social position, it has

often involved sacrifice and disappointment, but it has given the satisfaction of service in raising upwards the human race.

In the light of what has already been done, small though that may seem to be, we may have visions of what will yet be accomplished, if not by ourselves, through those who follow. We are not mere visionaries, yet must dream as to the future.

#### Dreams

Are but the light of clearer skies,  
Too dazzling for our naked eyes.

It is the imagination of what may be that leads us on to greater effort. We must strive to see things not yet. That is the inspiration of all sustained effort. Without it we shall move with leaden feet. It is quest, not conquest, which makes for strength.

The object which is now before us is not to establish an Association of poultry breeders and producers, not to add another society to the multitudes already in being, not to promote the interest of any group or branch. We desire to serve each of these though it may be indirectly, yet none the less effectively, by advancing the knowledge, and, therefore, the power, of all who are engaged in poultry teaching and investigation wherever they may be found, and of such as may be added to the ranks. We seek to increase the influence, to extend the opportunities, to strengthen the position of all; to enable them to render greater service, and to secure for them recognition of their labours. I think it was John Stuart Mill who said that "almost all the advantages which man possesses above the inferior animals arises from the power of acting in combination with his fellows; and of accomplishing by the united efforts of numbers what could not be accomplished by the detached efforts of individuals."

Whilst, therefore, the Association will be mainly composed of men and women who are instructors or investigators, or who contribute to the general knowledge upon the subjects with which we have to deal, it will include many, we hope, who are not directly connected with institutions or experiment stations, but, who by their personal skill as breeders or investigators, contribute to the general knowledge. Such will be welcomed among us. We cannot do without them. Sir Horace Plunkett has remarked that "a new institution is at best but a new opportunity." Such must be realised by all.

May I suggest to you that every country has something to teach and much to learn? All can contribute to the common stock. We wish to delve into and prove the value of traditional



poultry lore and experience, the result of centuries of practice, found in countries such as Belgium and China, Egypt and France, England and India; we desire to bring out the treasures which may await us in Central Asia and Central America, carrying us back to periods long before the Christian era; we seek to know more of newer methods as adopted in America and Australia, Denmark and Germany, Russia and South Africa; and to band workers together in a common purpose, so as to disseminate throughout all nations knowledge and experience. In that way we may hope in some measure to standardize teaching, to enlarge research and experiment. Such is a great task, but it is worthy of our efforts.

We have assembled to lay the foundations of a great world influence. In the realisation of that object individualities and nationalities must be recognised. These form the basis upon which we build. Each land should evolve in accordance with its special conditions and environment. The day may be anticipated when every country will have its own national association, following the example already before us, federating these into the international body, in which the nerve centres of each shall find their expression, and by means of which all can be influenced. From time to time all may assemble together for mutual help and inspiration, but meanwhile they will feel the impulse from the centre. The work before it is constructive, not destructive.

The agenda for consideration by the provisional committee as presented to you contains much that is of interest and importance which is commended to your deliberations. Upon this it is not desirable that I should dwell, as the various items will be discussed in detail. Upon one point I may be permitted to say a few words, namely, as to the World's Poultry Congress. During the last two or three years I have had communications from several countries suggesting that steps be taken to summon such a congress. It will be realised that the task of arranging for a gathering worthy the name and the subject would be no light undertaking. That the time has arrived when the position warrants our seeking to do this is evident, and we may hope that steps will be taken this week from which we may look forward to the assemblage of a large and representative gathering of poultry men and poultry workers in a great parliament of all the nations, embracing every branch and side of the industry, productive and trading, educational and investigational, fancy and utility, together with those government departments to whom we look for support and whose co-operation we seek.

That, however, is only one of the questions for our consideration. The main purpose before the members of this committee is wider and deeper. As your President, I ask for your cordial co-operation and loyal support, resting assured we shall have the same from those who, unable to be present, are ready to do their part in making this association not merely a numerical success, but as a factor in helping forward the poultry industry over the entire globe.

In conclusion, I desire to acknowledge the invaluable and hearty support of those who have so warmly and generously accorded assistance in arrangements for this gathering. You have already expressed thanks to Lord Lucas, with which I desire to be associated, for coming here to accord a welcome on behalf of the Board of Agriculture and Fisheries, which department represents the English people. Those who, like myself, have known Lord Lucas for some time look forward to extended service on behalf of his country. Whatever position he may occupy his interests are largely agricultural, as he has abundantly proved, and he has shown his deep sympathy with the poultry industry in many ways, as no one knows better than myself.

To Lord Middleton, President of the Royal Agricultural Society of England, that great body which has done so much for the advancement of farming and stock breeding in this country, we tender our hearty thanks for his presence here to-day, and for taking the chair in the earlier stages of our proceedings. I consider it as a great compliment that he conducted the election of your President. We look upon that as a presage of an even closer connection between agriculturalists and poultry workers. At the same time we ask his lordship to be the medium for conveying to the Council of his Society our warm appreciation of the kindness shown in loaning us this room for our meetings, which is indeed of the greatest service. Others are helping us in various ways and have contributed and will contribute greatly to the week's proceedings. Their kindness will be acknowledged in due course.

I should wish, also, to be permitted to mention the invaluable services rendered by Dr. Raymond Pearl, whose praise is in the mouths of all poultry workers for his labours at Orono, Maine, and whose fame is world-wide, as Secretary. To him is due whatever success may be achieved. He has wrought hard and laboriously from the inception to the present time. I dare not have responded to the call made without having as coadjutor one who has helped to raise the poultry industry to a higher plane than it had previously occupied.



## THE INVISIBLE CHICKEN.

SIXTH ARTICLE.—HOW CHICKEN COMES FROM YOLK.

*Written and illustrated by* JAMES SCOTT.

THE connexion between the embryo of the young chicken and the yolk and albumen is very remarkable, and deserves a chapter to itself. The embryo does not simply enlarge within a mass of nutriment. It has to be properly separated from its food, and be so placed that it may develop untrammelled by the presence of exterior substances; yet the albumen and yolk are as certainly transformed into chicken as dough, when baked, becomes bread.

In the first place there exists an embryo that cannot grow without sustenance, and the latter is provided in exceptional abundance.

In the second place it must not be swamped with food, but be fed systematically with it. We shall see how far these needs are provided for.

The terms food and feeding at present mean that the embryo is supplied with the ingredients necessary to create bone, flesh, muscle, feathers, blood, and so forth.

When we break open an incubated egg (provided it is not too old) and let its contents fall into a small glass jar, they usually appear as an indefinite amount of fluid in the middle of which

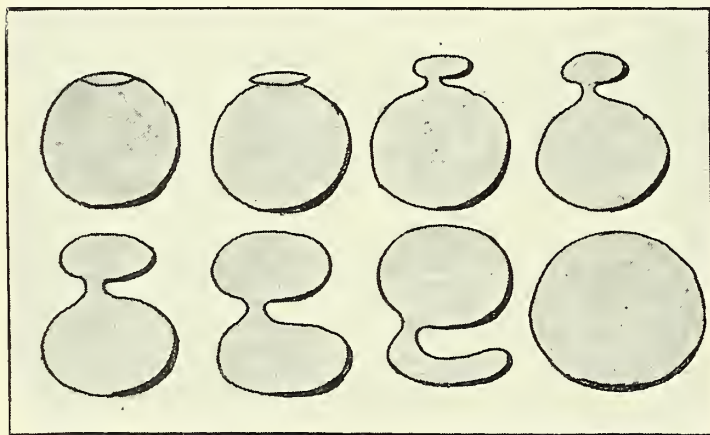
to and fro, that we can discover the exact style of the formations concerned. In this way we may see that the embryo is separated from, and yet connected with, the yolk sac, or ball of yellow oil generally called merely the yolk. We shall understand the matter better if we consider for a few moments the contents of the newly-laid egg.

On the top of the yolk is a small white disc, as I explained in an earlier chapter. This disc, is called the blastoderm, and *when it contains a male germ*, develops into an embryo. All the remainder of the egg is supplied as food for the sustenance of this germ-laden blastoderm. During its ripening, so to speak, it gets gradually separated from the yolk, until finally it is entirely distinct from it, and yet it absorbs that yolk.

The manner in which this procedure happens is as follows: At each end—that is if we can say that a disc has ends—the skin folds underneath, and so lifts the disc up from the yolk. The points of detachment correspond with the head and tail of the embryo. Then the constrictions extend round sideways as far as needed, until they almost encircle the under surface of the disc. In this way we obtain an embryo separated from, and yet attached to, its yolk. The diagrams Fig. 1 will assist the reader to understand these modifications.

The blastoderm-disc is connected with the interior of the yolk by means of a narrow thread of “white,” or albumen. This can scarcely be called a neck, but no doubt plays a part in forming one. Concentric sheaths of albumen extend globularly round the inside of the yolk. They are so delicate, however, that it becomes almost impossible to properly examine their behaviour during the development of the egg to chicken. It is of more importance to notice that the disc, while held in place by the string of albumen, is separated from the yolk in the manner outlined.

Suppose we have a huge soft pudding—one the size of a 3ft. globe, for instance—in a seamless spherical bag. On top, beneath the skin of this pudding, is a small plate. Now press the fingers of both hands beneath the edge of the plate at opposite parts. This will cause two under-creases. Tie a string round below the plate, using the creases as guides. Later on tighten the string up until the plate is nearly



**Fig. 1. Diagrams of yolk, showing how the disc or blastoderm gradually separates, absorbing the yolk, and thereby becoming the chicken.**

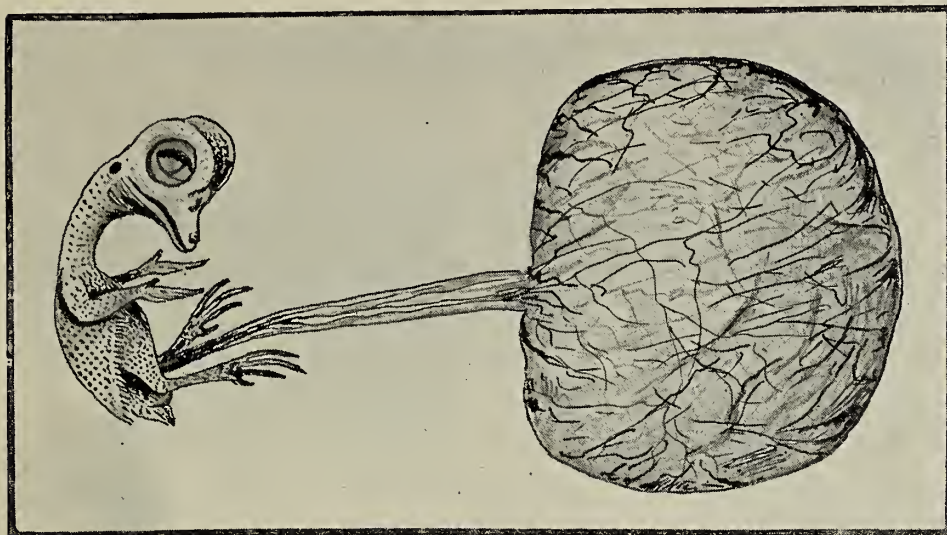
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is situated the developing chick. It may be advisable, in order to avoid damage, to split the egg while holding it under water. The contents will then gently float out when the halves of the ruptured shell are pulled apart.

I have illustrated some variations of this phase. When dropped into water we can so separate the parts, by tenderly moving the mass



severed from the pudding, leaving only a narrow neck beneath it. The plate in such a case will represent the blastoderm embryo, while the pudding will typify the yolk sac. Imagine that the plate expands and thickens by withdrawing the substance of the pudding into itself through the narrow connecting channel, with the consequence that the pudding gets smaller and smaller, finally disappearing, and you will get the foundation idea of what occurs in the egg.



**Fig. 2.** The above illustration shows how the young chicken is attached to the yolk, by the absorption of which it is enabled to develop.

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With regard to the actual embryo and its surroundings the joining pipe lengthens as the incubated egg increases in size. At one time, such as the 12th day, it is comparatively long. In Fig. 2 this fact is fairly well emphasized. While in the egg, however, or when the contents are dropped into a small jar, it is curled over and under itself in the manner shown in the magnified pinhole Fig. 3. Veins, arteries and "cords" run along inside this pipe, or within its "walls"—i.e., the thickness.

The pipe and other parts are very elastic, and stretch to a very great extent when pulled about, yet they are so delicate and thin that a mere pin prick will gash them widely open. The pipe is connected with the belly of the embryo.

It is possible to run a penholder beneath this pipe, and to bodily lift up both the embryo and yolk bag, the first object being on one side, and the second on the other, while the pipe crosses the penholder and depends below on both sides for some distance.

We have to look at the half matured object in this light. On one side is an embryo in a bag of membrane, closed up except at one part, where it is joined by a pipe to a sac or bag containing the yolk. Both membranes are

traversed by blood vessels. These objects are surrounded by the "white" or albumen, which soaks in and through the yolk, and combining with it ultimately permits a living chicken to be produced.

The blood vessels ramifying over the yolk bag absorb the necessary ingredients from the yellow oil, etc., around which they extend, and carry it through the pipe into the blood vessels of the membrane which encloses the embryo, thereby feeding it. Of course, some fluids may percolate direct from one bag to another through the pipe; but organization must be perfected by means of the circulatory system. I do not mean to say that blood, or other fluids circulate as they do in life, but there are osmotic—i.e., suction—movements from one part to another, and these in the usual vigorous circulation when the chicken hatches, breath air by means of its newly expanded lungs, and start the heart beating rhythmically.

The matter may be likened to the formation of a spring. Water trickles downwards hither and thither in a haphazard manner, gradually concentrating itself, however, into one part of the earth, whence it gushes forth as a spring which runs forwards to form a stream that becomes a rivulet, and then a river with several branches. The water *comes* irregularly from *anywhere*, but *goes* afterwards along prescribed channels systematically arranged. The river supplies the land with salts dissolved out from elsewhere, and so enables vegetation to gather symmetrically into position. In like manner, the nuclei, or life specks, which are described in another chapter, pick up suitable atoms of nutriment from any part of the egg, carry them elsewhere, and form them into veins, arteries, and so on, on a well-designed plan, and in this way build up the body.

We cannot be much more precise than this, not at any rate in a popular description. Even scientists, however, cannot be much more explicit, though their language is more elaborate and applied to every scrap of matter in the egg and the embryo. The most advanced observers have to confess that while they can trace development down to, or up from, certain points, they are frustrated when endeavouring to dis-





**Fig. 3.** A greatly magnified view of the cords and vessels in their natural rolled-up condition, which connect the embryo chicken with the yolk. (See Fig. 2.)

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cover the truth in full measure. The fact is as though we watched a fellow creature painting, acting, making furniture, or otherwise engaged. We know that the man guides his muscles and joints by the thought of his brain, and the exercise of his will; we know that the brain depends on the presence of phosphorus to actuate it, but we do *not* know whence the initial influence of thought proceeds. Phosphorized compounds by themselves are inert, and a brain, though full of phosphorus, and with all its cells intact, may become impotent. We are completely baffled when we try to go further than this survey enables us to.

In a similar way we can see nuclei building up a body by sub-dividing its cells; we can see the yolk and white dwindling in quantity, and the embryo getting larger. We can test for the existence of definite substances which change into chicken. But we cannot say what power it is that brings about the wonderful variations, We may call it life, but we are still in the dark, for we do not know what life is.

## POULTRY PROSPECTS IN BRITISH COLUMBIA.

By A. T. JOHNSON.

At the present time when Canada is so much on the public eye there are possibly many poultry-keepers in the old country who are anxious to know something of the conditions, relative to our industry, which exist in the Dominion. But I am not going to try—even if I were able, which I am not—to deal here with the poultry prospects of the whole of British North America. But, having lived for the greater part of a year on the coast districts of British Columbia, having travelled about a good deal, and spent much time in the company of fanciers and utility poultry-keepers on their ranches, and having gathered something of their thoughts, ambitions and progress, I think that, perhaps, a column or so of information sifted from a well-filled log may not be uninteresting matter to readers of the *Illustrated Poultry Record*. Especially should this be so when we know that, of all Canada, the farthest west is at the moment enjoying a particularly lively awakening. British Columbia is the “Last New Place,” and, as such, it is attracting the attention of the two hemispheres. But I am not out to “boost.” I have not got any real estate to sell. I am not even sure that I would be any happier if I had. But I know that there are thousands of people—lured by the magnetism of the west—leaving British shores every week, and it is to those who are meditating

upon a similar step that these observations are mainly addressed. I write from a purely unprejudiced standpoint—the standpoint of an itinerant observer who has no axe to grind or log to roll for anybody.

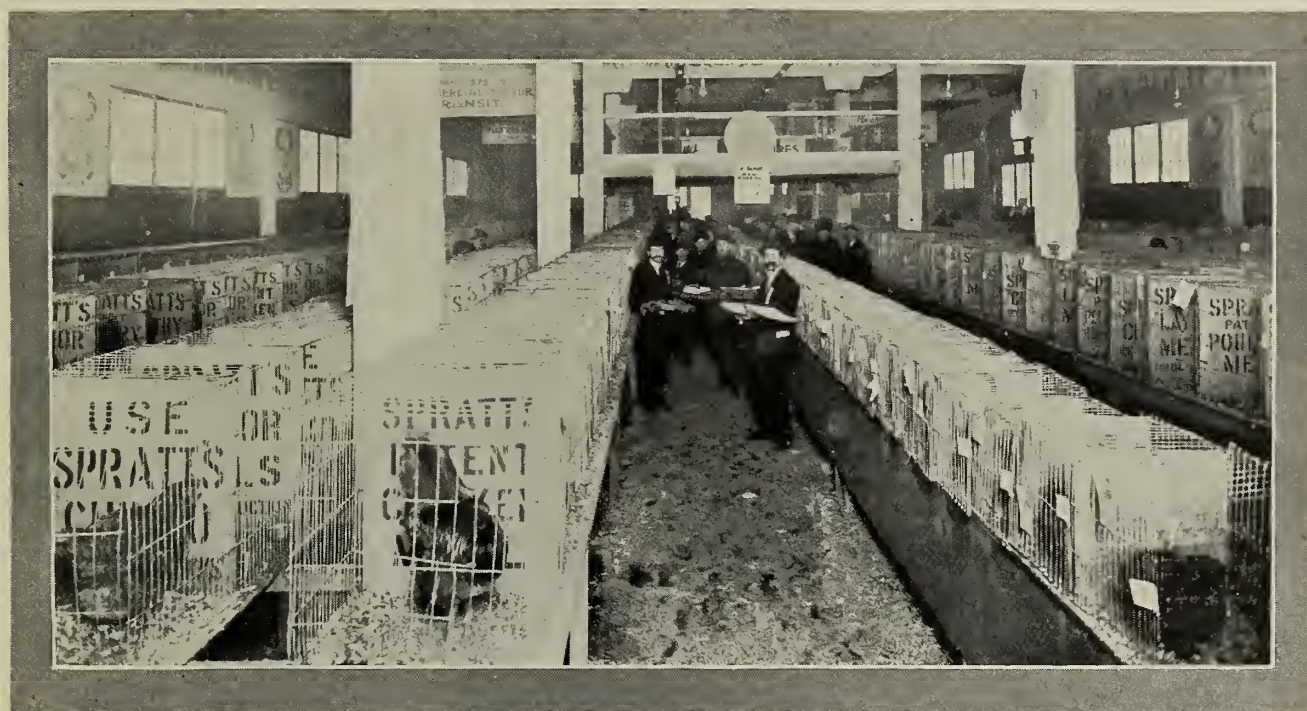
What sort of a notion of British Columbia exists, I wonder, in the minds of would-be-emigrants? To judge by the questions put to one of these aspiring fortune-hunters average people at home have about as clear a comprehension of the province as they have of the parish of Timbuctoo. I once went to school, but my own knowledge of the geography and other features of British Columbia was just about as hazy. Briefly, then, with the object of throwing some light upon this subject, let us spread out the map of Europe. Now draw a line from the Atlantic side of Ireland southward through, and including, the North of France, taking in Belgium, Holland, the whole of Prussia, the northern provinces of Germany, the Baltic Provinces and coast of Russia to the Gulf of Finland, the South of Sweden, Denmark and the British Isles, and we shall have a vast territory, of about 400,000 sq. miles, equal in area, and very similar in its varying climatical conditions, to British Columbia. True, a great part of this is a region of untrodden snow with which we are not immediately con-



cerned, but taking the opened-up tracts of land—and few, if any, new countries have been so well served by railways as this one—there remains a great diversity of climatic conditions, from the interior plateau, with its dry, rounded hills, bunch of grass and meagre rainfall of 7 or 8 inches, to the coast where the precipitation may be anything from 26 inches to 100 inches of rain per annum. It is, therefore, quite as impossible to speak generally of the climate of British Columbia as it would be to do so of that section of Western Europe mentioned above. But, topographically, one may say at once that the province is mountainous. It has some fine tracts of agricultural land—especially on Vancouver Island—but it

serves to refresh our minds of that peculiarly stolid equanimity which has always been so characteristic of the Briton as colonist. The captain of a ship that was sailing up one of the great rivers of B.C. saw a man in the water swimming towards him. Asked what accident had befallen him the latter replied. "I had the misfortune to fall off my ranch, Captain. Deuce'd awkward sometimes, don't you know, especially of an evening when one is collecting the eggs."

But, while one is glad to know that a better fate than that awaits the man who takes up land in B.C., the would-be-colonist must be prepared to find the nature of the country very different from



**General View of the biggest American Provincial Poultry Show.**

Held at Vancouver, January 15th, 1912, under the auspices of the British Columbia Poultry Association.

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remains, on the whole, a country of high altitudes, deep canyons, and forests, impenetrable forests everywhere, save perhaps in some sections of the interior "dry belt."

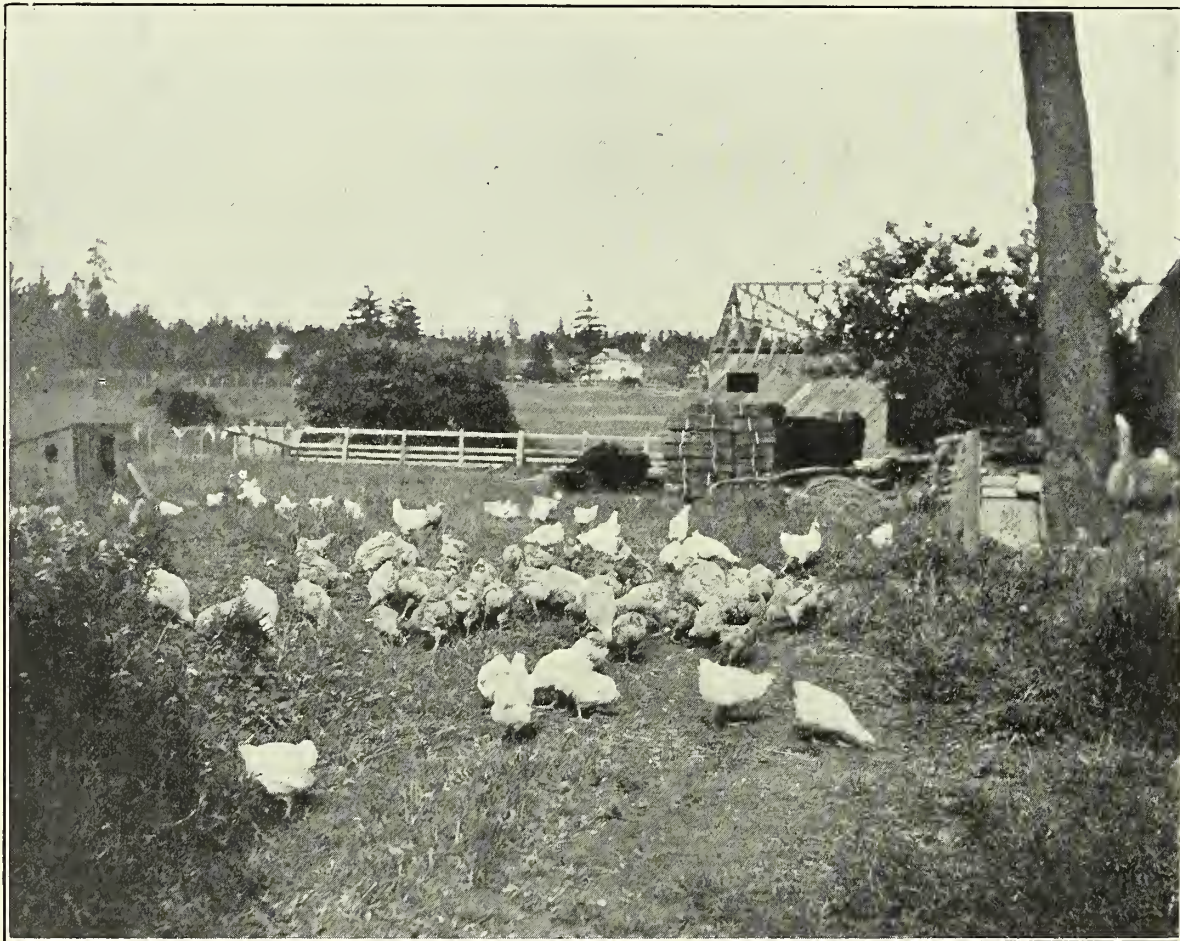
But in spite of the comparative lack of open country, the high cost of land, the expense (£25-£35 per acre) of clearing out the pine stumps, and other obstacles the poultry-keepers of B.C. are a progressive and rapidly growing community. Once away from the Old Country, and most of them are of British descent, they appear to become possessed of a bolder spirit of enterprise and tackle difficulties which at home they would be afraid of. And I am reminded, in passing, of a story which not only illustrates some of the trials which these pioneer adventurers may have to put up with, but

what he has been accustomed in England. He will, for example, seldom see such a thing as a grass run for poultry, scratching-sheds and small earth runs being the general principle adopted. These latter are rapidly multiplying in the neighbourhood of all the larger towns where the demand for eggs and poultry is, in spite of increased production, steadily outstripping the supply. Indeed, the latter does not nearly meet the requirements. Car-loads of frozen fowls, turkeys, etc., are being shipped in from the east and America in increasing quantity. Local eggs never fall below 30 cents a dozen and do not remain more than a week or two at that price. 40 cents is an average market price, and fowls are worth anything from 18 cents to 26 cents per lb. I have just seen (June) a crate of ducklings, which



latter we would consider an indifferent lot in England, pass from producer to middleman at \$1.15 (almost 4/9) each. And I am told that there is a good and growing demand for pure-bred stock and sittings of eggs. Indeed it would be surprising if this were not so if one considers the rapid increase in the number of poultry-keepers. On the other side of the sheet we find that food is, in small lots, rather more expensive than in England, land is high-priced whether purchased or rented, labour is almost prohibitive and the cost of living is generally high. But on the face of things the possibility of making a living (I will not say fortune) out of the "chicken business" in British Columbia is more promising than in most places that I am acquainted with. There are to-day many large ranches in the province consisting of one or two thousand layers, mostly Leghorns, kept on the American plan and these are profitable concerns. Their main business is egg production, the surplus youngsters being sold as broilers. The rearing and fattening of stock expressly for table

inefficiency—whichever way you prefer to look at it. Speaking one day to the editor of *The Successful Poultryman*, which is an admirable little journal and the official organ of the B.C. Poultry Association, he said that the trouble was to get men who had capital and experience. Too often the adventurers who enter the province and take to poultry-keeping are they who think that it is a business that can be operated on a small capital. They are the poorer class of immigrant and the very fact that they imagine they can make a living out of hens by investing a few pounds is a sufficient indication of their knowledge of the subject. Well, they go into it, struggle along for a short while, and come out of it fleeced. It is the same old tiresome affair which we in England know so well, and, being so, I need not enlarge upon it here. I suppose there will be people to lose their money in vain explorations into the hazardous country of poultry keeping as long as the world lasts—people who will not listen to warnings, who think they know better than anybody else. It may be sweet



#### PROGRESS IN BRITISH COLUMBIA.

View on Mr. Pither's poultry farm, near Victoria, B.C., where housing and run accommodation for over 2,000 laying hens is being erected.

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is practically non-existent though the demand is there. Then we have, as already suggested, vast numbers of smaller utility establishments and these, as is the case with those of the sort in other countries, are of infinite degrees of prosperity or

consolation to some of them to think that it were better to have tried and failed than never to have tried at all. But to the practical mind such fatuous endeavours are a waste of precious time and money. They are, furthermore, a direct set-back to an



industry that wants all the support and encouragement we can give it. It is not the slightest use anyone going out to British Columbia (or anywhere else) with the hopes of starting poultry ranching, or any other agricultural pursuit, unless he has ability and capital. And the usual so-called "colonial training" is generally discovered to be a miserably poor prop when tackling the real thing. It may have some quite obscure use—like an "Oxford manner" for example—but the man who has it and it alone as his sole experience is ill-fitted for work on the soil in any land. Then, again, as to capital, I am measuring my words and my figures when I say that a man of ability, if he desires to fix up a utility poultry ranch large enough to employ the whole of his time and that of an assistant will not do it on less than \$1000 (£200). And on the top of that one should reckon at least the cost of living for the first year.

Thus we come round to the deduction that one requires just about the same equipment as if one were starting in England. It may be that, in the event of there being less available capital than I have mentioned, a man would stand a better chance in the west than in England. And he will have this consolation that if he fail he can soon get other work at a good wage if he knows how to use his faculties. But that is beyond my subject. Whether a poultry keeper, with experience and ample capital, would do better in British Columbia than in the old country is a question I cannot answer. So much depends upon the man's individuality. To succeed in business in a new land demands a peculiar trait of character. Something more than determination and hard work is essential in the art of "making good." If I were asked by a man with a trade as to whether he would be doing wisely to emigrate to British Columbia, I would not hesitate to say—Go. But if the question were put by an intending poultry keeper I would consider long before taking on any responsibility. And I would first want to know his reasons for not carrying out his project in England where, for the man with brains, money, and experience, there are still good opportunities on the land—possibly better than there are anywhere else, considering everything.

As in America the fanciers of British Columbia have a strong leaning for the utility side of their stock. Their standards are, for the most part, framed to that end. One result of this is that one rarely sees a cross-bred fowl of any sort. And the converse, that one seldom comes across what we would call a first-class specimen, is no less true. To the English fancier's eye, the birds are small and they often lack purity of colour. But, then, the standards do not, and perhaps very wisely, encourage breeding for size at the expense of economic properties. And, on the whole, and from the standpoint of their own ideals, the fanciers of British Columbia are to be congratulated for having got together in a comparatively few years

such a fine head of stock both in variety and number. At the moment Reds are "booming," and I hear that Campines have lately had quite a little flutter. But Wyandottes are, perhaps, the most even lot, and I have seen some excellent Whites, Columbians, and Silver-pencilleds. Numerically, perhaps, White Leghorns are the strongest, being the favourite layer. Waterfowl are very weak and there ought to be good openings in this department both in utility and fancy stock.



**MR. W. HOPKINS-JONES.**

Poultry lecturer at the University College of North Wales, and the Welsh representative at the International Conference.

And in bringing this article to an end I may mention that the first Provincial Show held in British Columbia under the auspices of the B.C.P.A. at Vancouver last season was an unqualified success. Three thousand exhibits were brought together at this meeting, and if one takes into consideration the very wide area from which they were drawn and the fact that the country and the poultry industry are still quite in their infancy, the entry must be considered a remarkably good one.



## WHO'S WHO IN THE INTERNATIONAL ASSOCIATION.

### MR. A. M. PRAIN, J.P.

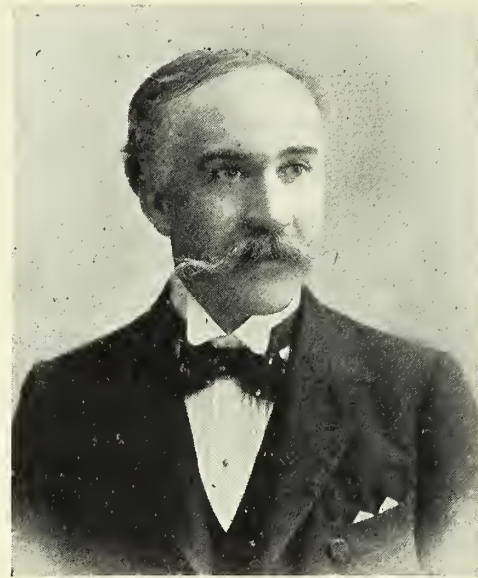
Mr. A. M. Prain has been for years known as a successful breeder, exhibitor, and judge of poultry. He has not restricted his attention, however, to the "Fancy" side of things only, for, as a practical farmer, he has ever kept in mind the fact that for the development of poultry-keeping on national lines egg- and meat-production are all-important. Hence he has given a great amount of attention to farm poultry-keeping, and by his lectures in many parts of the country under various county councils, by his example and writings, and by his work in connection with the formation of co-operative societies under the Scottish Agricultural Organisation Society he has contributed very largely indeed to the awakening of public interest in this



**MR. A. M. PRAIN, J.P.**  
(SCOTLAND.)

subject and to the adoption of such steps for improvement as have been taken. As a member of the Scottish Commissions to Denmark in 1904, to Ireland in 1906, and to Canada in 1908, and as a delegate to the poultry conferences in 1899 and 1907, he has taken every opportunity to extend his knowledge and experience in this subject.

Born in the Carse of Gowrie, the son of a farmer, Mr. Prain has grown up a farmer, but always with a penchant for poultry, which, on his own farm for twenty-four years, he developed with great success. That began in 1882, as a practical branch of his operations. He has kept nearly every useful breed



**DR. LOISEL.**  
(FRANCE.)

of fowl, the main idea being to find out by experience which were the most profitable breeds and to produce the best specimens of them. As an exhibitor, Mr. Prain has been highly successful, having won upwards of 6000 prizes. The absence of interest in poultry questions yet found in Scotland is not due to lack of efforts on Mr. Prain's part, for in the course of his wanderings he has visited nearly every part of the country, lecturing and organising, and has acquired a knowledge of the greatest value. But more interest is now being taken than ever before, and in that Mr. Prain can fairly be credited with an important share. It is, however, only the beginning of things. His appointment as poultry inspector under the newly-formed Scottish Board of Agriculture is probably fresh in the minds of our readers

Mr. Prain is a Justice of the Peace for Perthshire, a member of the County Council, and of several important committees. He is keen sportsman and a skilled musician.

### MR. ALFRED BEECK.

Mr. Alfred Beeck was born in 1855, at Halle, on the river Saale. Educated at the high school of Halle, he devoted himself to pharmacy, and in 1880 started business for himself. On his marriage in the same year he set up a poultry yard, his favourite breeds being black smooth-footed Langshans, partridge coloured Italians, and Aylesbury ducks. His knowledge of chemistry enabled him



to carry out numerous scientific experiments with regard to the diseases of poultry, heredity-feeding, housing, and artificial hatching and rearing. Since 1880 he has been an honorary member of the Central Ornithological Society of Saxony and



**MR. A. BEECK,**  
(GERMANY).

Thuringia; since 1890 of the Federation of Poultry Breeders' Societies of the province of Saxony, and since 1896 of the Eilenburg Poultry Breeder's Society. To the management of all three societies he has for years applied himself with great conscientiousness. He is also an honorary member of the Styrian Poultry Breeders' Society in Gratz (Austria). The central Poultry Breeding Institute of Crollwitz, Halle (Saxony), now 12 years old, was established, built, and equipped by the Chamber of Agriculture at a cost of 100,000 marks (£5,000) on the plans and under the direction of Mr. Beeck. He has travelled considerably in most European countries, has lectured at the University of Halle on poultry breeding, while he is the author of numerous articles on poultry and agricultural matters. His principal book is the two-volume work "Illustrated Handbuch der Gefugelszucht" (Illustrated Handbook of Poultry-breeding), which he followed up later with a smaller book, "Landwirtschaftliche Federviehzucht" (Agricultural Poultry-breeding). His latest work was the publication "Allgemeine Geflugezuchtungslehre" (The General Science of Poultry-breeding).

#### M. PIERRE AMEDEE PICHOT.

Early joining the staff of *La Revue Britannique*, M. Pierre Amedée Pichot devoted himself entirely to the editing of this production. After the death of his father in 1876, M. Pichot travelled much in England, Russia, Egypt, and America, in which latter country in 1868, he took part with a detachment of the 37th U.S. Infantry in an expedition

against the Sioux. During the Franco-German war of 1870-71, he served in the volunteer corps of Commandant Féry d'Exlands. A lover of sport and natural history he was one of the founders and for a long time one of the administrators of the Jardin d'Acclimatation in Paris; he introduced Dog Shows in France, and gave a new impulse to the sport of falconry as practised to-day in France.

Associated with several learned societies he is corresponding member of the Royal Zoological Society of England and of the Agricultural Society. M. Pichot has written for numerous publications and journals of France and England and on several occasions has acted as special correspondent of the *Field*.

On his farm at Sevres, Seine et Oise, M. Pichot has made numerous attempts at the rearing and cultivation of exotic animals. His Game Bantams (Black-Red), have been awarded firsts in the shows and took the Coupe d'honneur in General Agricultural Show at Paris, in February, 1911.

#### Breeders and Owners in Laying Competitions.

In connexion with the Hawkesbury (N.S. Wales) laying competition, a protest has been lodged and sustained against one of the prize-winners, on the ground that the successful hens were not bred by the competitor.



**MR. P. A. PICHOT,**  
(FRANCE).

#### Blackhead in Japan.

It is reported that Blackhead in Turkeys has destroyed large numbers of these birds upon the farm of the Agricultural College, in connexion with the Tohoku Imperial University.



# THE POULTRY POPULATION OF GREAT BRITAIN.

What is and what might be. Facts from the Poultry Census.

By "STATISTICIAN."



WE have waited long for the results of the Poultry Census taken on June 4th, 1908. Four years appears to be an unconscionable time between the date of enumeration and publication.

The report just published by the Board of Agriculture and Fisheries embraces all forms of agricultural production, and it is in estimating the last named that the delay has occurred, for the schedules received numbered 650,000. Such a mass of returns would require an enormous amount of elucidation. So far as the census of Poultry is concerned there appears to be no reason why these should not have been issued three years ago as part of the annual statistics, leaving the production figures to be published when completed. If, as I hope may be the case, a poultry census is again taken in 1913, it is most important that this delay should be avoided, as there is no real justification for it.

However, we are glad to have the report at last, and there is much in it of interest and to compel careful consideration.

One point needing to be emphasised is that these returns only apply to holdings of one acre and upwards. Therefore, all poultry kept by cottagers, occupiers of smaller areas, rural and urban, and private residents, are not enumerated. Probably the inclusion of these would double the number of fowls in some districts, and add at least 30 per cent. over the entire country. We have to be content with what we can get. The Irish figures make a quarter of an acre the minimum, and it is a pity there is not uniformity.

Quoting from the report the following is stated:—

"Every occupier who received the annual schedule was asked thereon to state the number of fowls, ducks, geese and turkeys respectively on the farm on June 4th, 1908, distinguishing those hatched in 1908 from those hatched previously. He was also asked to state the number of home-bred poultry of each description sold during the preceding 12 months. Special schedules were issued to all occupiers returning not less than 50 fowls or 10 ducks, geese, or turkeys, asking for the number of males and females respectively hatched before 1908, the number of eggs produced, sold for consumption, or sold or used for hatching, and the number of young and adult birds sold.

"The caution previously given as to the limitation of the scope of the returns to holdings exceeding one acre is especially applicable to poultry, which are of course very largely kept by cottagers and persons who do not come within the definition of occupiers of agricultural holdings, while a further very large poultry population would no doubt be enumerated if the returns were extended to the towns.

"The numbers on the farms of Great Britain on the 4th June, 1908, were calculated as follows:—

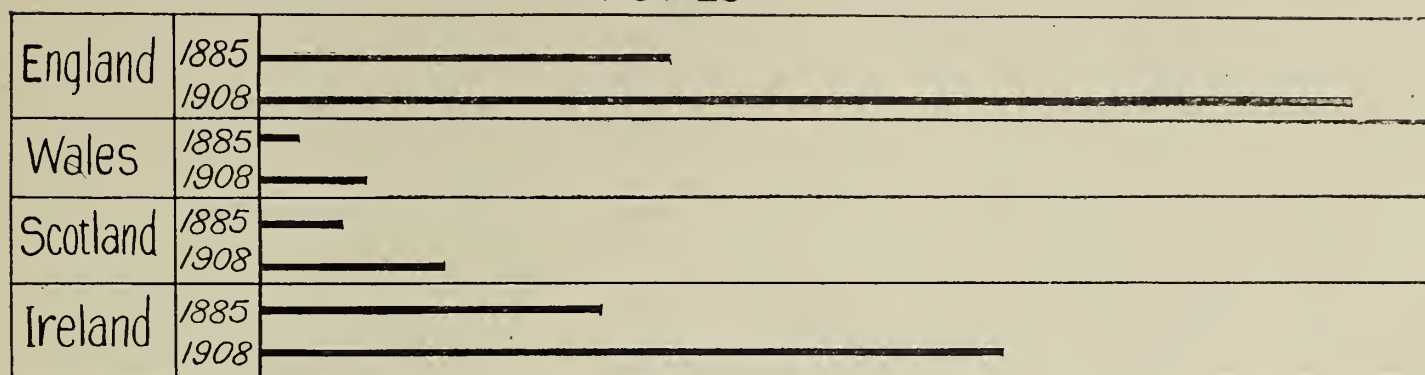
Fowls	...	...	...	...	32,356,000
Ducks	...	...	...	...	2,963,000
Geese	...	...	...	...	712,000
Turkeys	...	...	...	...	697,000

"The total extent of cultivated land in Great Britain—*i.e.*, of the land included in these returns—is 32,211,000 acres, so that the number of fowls kept is on an average almost precisely one per acre. For every 100 acres there are also kept 9 ducks, 2 geese, and 2 turkeys. From the Tables (12 to 14) given in the Appendix it will be seen that the density of poultry differs greatly in different districts and on different classes of holdings. Grass farms have the greatest average density on the whole, though on farms of this class exceeding 300 acres the stock is very small. The pre-eminence of small farms—*i.e.*, of 50 acres and less—as regards the number of poultry of all kinds to the acre is very marked, by far the greatest density being found on those not exceeding five acres. Fowls are kept in larger numbers in England than in either Wales or Scotland, but Wales has the largest stock of geese in relation to acreage. The division of England in which fowls appear to be kept in the greatest number is the North Western group of counties comprising Cumberland, Westmorland, Lancashire, Cheshire, Derby and Stafford. The influence of small holdings in Lancashire and Cheshire and the close proximity to great markets may account for this.

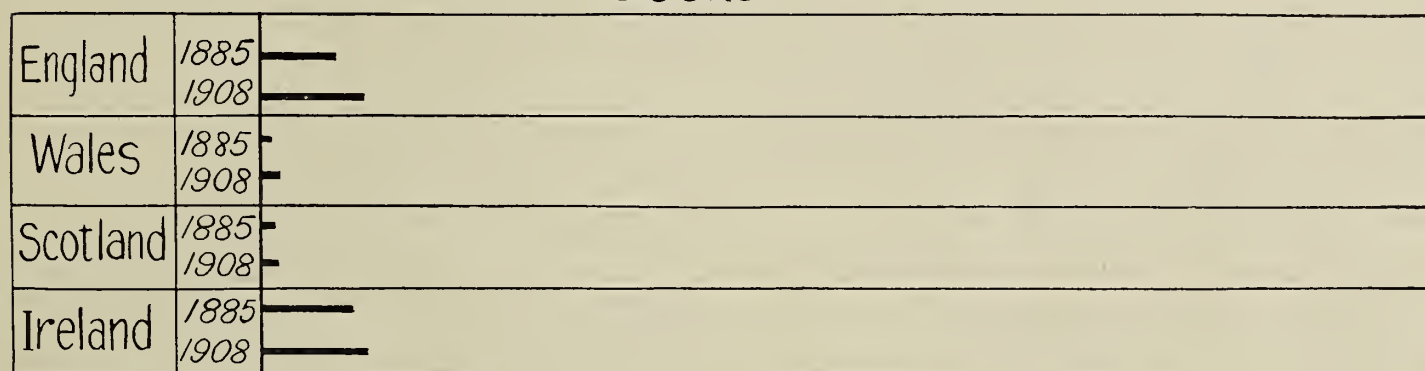
"In ascertaining the total number of poultry kept it was thought desirable to distinguish between those hatched before the year of the return and those hatched in that year. As the returns were made on June 4th, the number hatched in 1908 would of course include only those hatched in the first five months of the year and would therefore not completely represent a whole year's "output," though returns for



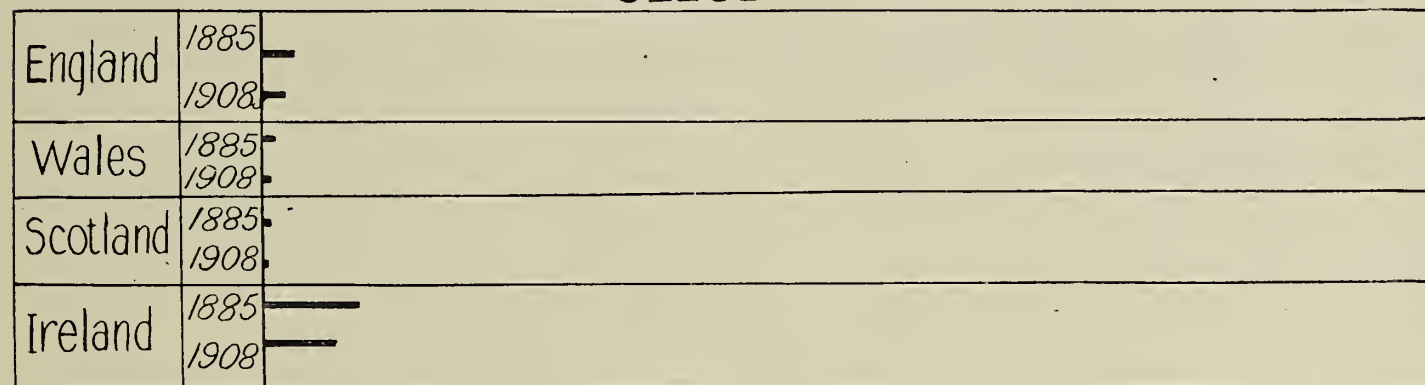
## FOWLS



## DUCKS



## GEESE



## TURKEYS

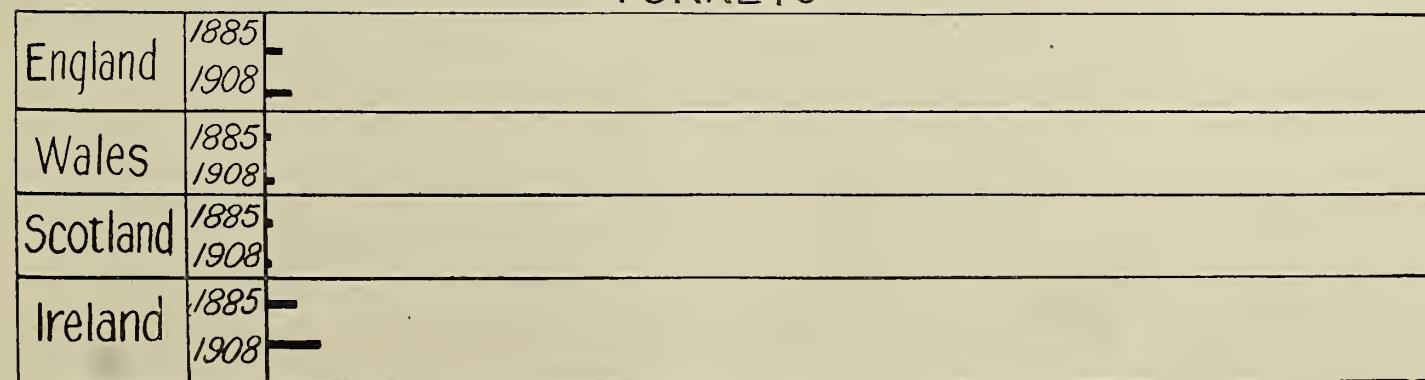


Diagram I.—Showing the relative numbers of fowls in the United Kingdom in 1885 and 1908.

[Copyright.]



the later months of the year would probably not raise the total very considerably. The numbers kept and the number of eggs produced, as calculated from the returns, are as follows:—

	Hatched.		Total kept.
	Before 1908.	In 1908.	
Fowls .....	17,443,000	14,913,000	32,356,000
Ducks .....	1,029,000	1,934,000	2,963,000
Geese .....	253,000	459,000	712,000
Turkeys.....	199,000	498,000	697,000

The previous Poultry Census was taken in 1885. A comparison of the figures between that year and 1908 indicates that there has been, except in geese, a marked increase in the numbers, especially in fowls, that is, assuming both sets of figures include old and young stock. The results are subjoined.

#### COMPARISONS OF NUMBERS OF POULTRY, 1885 AND 1908.

##### FOWLS.

	1885	1908	+ Increase No's	+ Dec'r. per cent.
England ...	9,556,053	25,962,000	+ 16,405,947	+ 171·68
Wales ...	874,882	2,287,000	+ 1,412,118	+ 161·43
Scotland ...	1,970,598	4,107,000	+ 2,136,402	+ 108·43
Great Britain	12,401,533	32,356,000	+ 19,954,467	+ 160·9
Ireland ...	8,042,899	17,664,172	+ 9,621,278	+ 119·62
United Kingdom*	20,444,432	50,020,172	+ 29,575,740	+ 144·65

##### DUCKS.

England ...	1,736,788	2,395,000	+ 658,212	+ 37·9
Wales ...	206,136	274,000	+ 67,864	+ 31·92
Scotland ...	258,677	294,000	+ 35,323	+ 13·66
Great Britain	2,201,601	2,963,000	+ 761,399	+ 34·58
Ireland ...	2,861,506	3,477,004	+ 615,498	+ 21·51
United Kingdom*	5,063,107	6,440,006	+ 1,376,897	+ 27·19

##### GEESE.

England ...	615,724	494,000	— 121,724	— 19·77
Wales ...	234,146	146,000	— 88,146	— 18·00
Scotland ...	35,440	26,000	— 9,440	— 26·66
Great Britain	885,310	712,000	— 173,310	— 19·58
Ireland ...	2,133,609	1,838,352	— 295,257	— 13·84
United Kingdom*	3,029,137	2,550,352	— 478,785	— 15·8

##### TURKEYS.

England ...	356,485	541,000	+ 184,515	+ 51·79
Wales ...	57,459	87,000	+ 29,541	+ 51·46
Scotland ...	60,639	69,000	+ 8,361	+ 13·8
Great Britain	474,583	697,000	+ 222,417	+ 46·87
Ireland ...	811,161	1,051,667	+ 240,506	+ 29·65
United Kingdom*	1,285,744	1,748,667	+ 462,923	+ 36·00

##### ALL POULTRY.

England ...	12,265,050	29,392,000	+ 17,126,950	+ 139·64
Wales ...	1,372,623	2,840,000	+ 1,467,377	+ 106·9
Scotland ...	2,325,354	4,496,000	+ 2,170,646	+ 98·5
Great Britain	15,963,027	36,728,000	+ 20,764,973	+ 130·8
Ireland ...	13,849,175	24,031,195	+ 10,182,020	+ 73·52
United Kingdom*	29,940,202	60,759,195	+ 30,818,993	+ 102·95

\*The figures for U.K. in 1885 include the Islands, but not in 1908 which explains apparent errors.

The above tables speak for themselves, and it is satisfactory to note the important progress made in fowls specially, an increase in Great Britain of nearly 20,000,000, or 160·9 per cent, and in the United Kingdom of 29,575,000, or 144·66 per cent is satisfactory. Ducks have made relatively small advance, whilst turkeys are distinctly better. The only decline is in geese, which was to be expected. These records gave great promise for the future and should be an incentive to increased effort.

In order to show the relative increases in respect to areas, I have worked out these as shown on the next page, which indicate the growth in twenty-three years per 1,000 acres of cultivated land.

The figures given are liable to mislead. Whilst it is undoubtedly true that on June 4th, 1908, there were 36 and a half million Poultry "of all ages" on the farms of Great Britain, nearly half were hatched in 1908, and intended to be killed or take the place of older birds which would later in the year be sold or slaughtered. Therefore it is the first column, that of birds hatched before 1908 which really counts, and which indicates the breeding stock of the country. June is an unfortunate period for such an enumeration. What we want to get at is the number of breeding stock.

In the diagram which is here given I have worked solely on that basis. The young birds are ignored. It will be seen that there were 18,924,000 adult poultry on June 4th, 1908. The distribution of these is shown by the shaded portions.



## COMPARISONS PER THOUSAND ACRES OF CULTIVATED LAND 1885 AND 1908.

Country	Fowls		Ducks		Geese		Turkeys		All Poultry	
	1885	1908	1885	1908	1885	1908	1885	1908	1885	1908
England ...	384	1057.08	70	97.52	25	20.11	14	22.02	493	1196.73
Wales ...	311	820.59	73	98.31	83	68.89	20	31.21	487	1019.00
Scotland ...	407	844.54	53	60.45	7	5.34	13	14.2	480	924.53
Great Britain ...	381	1004.19	68	91.96	27	22.10	15	21.63	491	1139.88
Ireland ...	529	1204.84	188	237.16	140	125.39	53	71.73	910	1639.12
United Kingdom	429	1066.93	106	137.37	63	54.4	27	37.3	625	1296.00

Taking the possible average of three fowls per acre of cultivated land, I have adopted the figures published in the April "Journal of the National Poultry Organisation Society, on "The Capacity of Great Britain in Poultry Production," in which it is shown that the possible number of fowls, without displacement of any crop or other stock, is as follows:—

England ...	73,435,278
Wales ...	8,311,191
Scotland ...	14,537,505
Total	96,283,974

The extended portions of the diagram show what will be the case when the average named is realised. It will be seen that I have classed all poultry as fowls, the relative proportions of ducks, geese and turkey affecting the calculations very slightly.

What these figures mean is that in

England	the adult fowls are 20.12 p. c'nt of what might be
Wales	" " 17.3 " " "
Scotland	" " 18.25 " " "
Great Britain	" " 19.65 " " "

Unfortunately the county statistics have not been published, which is a great omission. England is divided into districts, as follows:—

THE COUNTIES IN EACH AGRICULTURAL DIVISION.

ENGLAND.

DIVISION No. 1.	DIVISION No. 3.
a.—Bedford.	a.—Salop.
Huntingdon.	Worcester.
Cambridge.	Gloucester.
Suffolk.	Wiltshire.
Essex.	Monmouth.
Hertford.	Hereford.
Middlesex.	b.—Somerset.
London.	Dorset.

b.—Norfolk.  
Lincoln.  
York, E.R.

Devon.  
Cornwall.

DIVISION No. 2.

a.—Kent.  
Surrey.  
Sussex.  
Berkshire.  
Hampshire.  
b.—Nottingham.  
Leicester.  
Rutland.  
Northampton.  
Buckingham.  
Oxford.  
Warwick.

DIVISION No. 4.

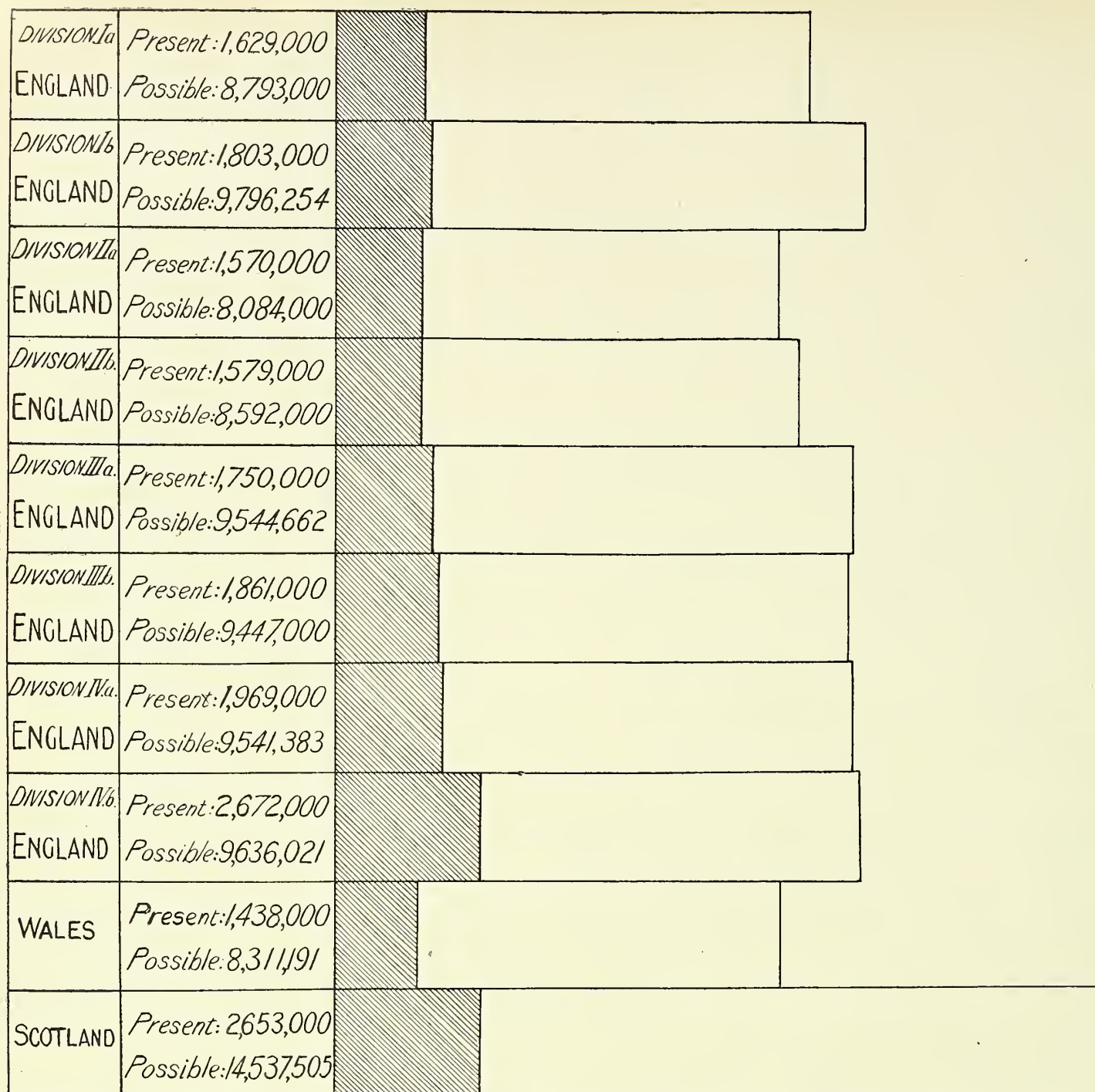
a.—Northumberland.  
Durham.  
York, N.R.  
York, W.R.  
b.—Cumberland.  
Westmorland.  
Lancaster.  
Chester.  
Derby.  
Stafford.

Table 12 of this report divides the country in respect to the class of holdings, sharing the number of poultry on each. Unfortunately, here again all the poultry, young and old, are calculated, so that the table does not represent the actual facts. With that qualification I quote the averages published.

AVERAGE NUMBER KEPT PER 100 ACRES.

	Fowls	Ducks	Geese	Turkeys
Arable Holdings				
Above 1 & not exceeding 5 acres	705	55	4	5
" 5 " 50 "	212	17	2	3
" 50 " 300 "	84	6	1	2
" 300 acres	36	3	0	1
Total	131	10	1	2
Pasture Holdings				
Above 1 & not exceeding 5 acres	973	92	8	8
" 5 " 50 "	269	21	3	3
" 50 " 300 "	64	4	2	1
" 300 acres	12	1	1	0
Total	191	15	2	2





**Diagram II.—Showing the present number of poultry in Great Britain, and the possible number, on the basis of three fowls per acre of cultivated land. (The shaded portions indicate present poultry population and the white portions the possible increases).**

[Copyright.]

Mixed Holdings			
Above 1 & not exceeding 5 acres	1,089	103	9 9
" 5 " 50 "	235	23	4 4
" 50 " 300 "	78	8	3 2
" 300 acres	38	4	1 1
Total	84	8	9 2
All Holdings			
Above 1 & not exceeding 5 acres	940	86	8 7
" 5 " 50 "	244	21	4 3
" 50 " 300 "	77	7	2 2
" 300 "	37	3	1 1
Total	100	9	2 2

Had the relative figures been published for the different sized holdings the percentage of adult fowls might have been worked out, but these are not available.

Tables are given in the report showing the number of male and female poultry of all kinds hatched prior to and in 1908, with the totals in the various sections of Great Britain, and the averages per 100 acres of cultivated land. As these, however, are based on totals comprising old and young birds, the figures are, for reasons already given, misleading, embracing, as they



do birds which would be killed off soon after the enumeration. I have, therefore, extracted the records as to adults, and worked out the true averages, as seen in the accompanying table :

There are many important points which may be emphasised, deductable from the above figures, more especially as to the various sections of the Country. These must, however, be left over for the present.

### NUMBER OF POULTRY HATCHED PRIOR TO 1908

with averages per 100 acres of cultivated land.

Divisions.	Fowls.		Ducks.		Geese.		Turkeys.	
	Total No.	Per 100 Acres.	Total No.	Per 100 acres.	Total No.	Per 100 acres.	Total No.	Per 100 acres.
Ia Eastern	1,517,000	51·67	75,000	2·55	13,000	0·44	24,000	0·82
Ib North-East'rn	1,673,000	51·22	95,000	2·6	14,000	0·43	21,000	0·64
IIa South-East'rn	1,467,000	54·07	76,000	2·8	15,000	0·55	12,000	0·44
IIb East Midland	1,485,000	51·82	68,000	2·37	13,000	0·45	13,000	0·45
IIIa West Midland	1,568,000	49·11	126,000	3·94	32,000	1·00	24,000	0·75
IIIb South-West'rn	1,698,000	53·84	110,000	3·48	28,000	0·88	25,000	0·79
IVa Northern	1,873,000	58·71	62,000	1·94	23,000	0·72	11,000	0·34
IVb North-West'rn	2,493,000	76·93	129,000	3·98	34,000	1·05	35,000	0·49
Total—England	13,774,000	56·08	741,000	3·01	172,000	0·70	146,000	0·59
Wales	1,240,000	44·48	103,000	3·69	69,000	2·47	26,000	0·89
Scotland	2,429,000	49·94	185,000	3·8	12,000	0·24	27,000	0·55
Great Britain	17,443,000	53·84	1,029,000	3·19	253,000	0·78	199,000	0·61

#### Appointments in America.

Professor Rolf, late of the Connecticut College has been appointed Professor of Poultry Husbandry at the Mississippi State College ; Mr. L. T. Jones has been made instructor in poultry husbandry at the Georgia College.

#### Bresse Poultry.

It is stated that the production of La Bresse dead poultry, the famous La-Bresse, which command such high prices, in the Bourg district of France, reaches the annual figure of 1,300 tons, which represents nearly 450,000 specimens.

#### Courage in Poultry Keeping.

Mr. Henry D. Smith, of Norwell, Mass., U.S.A., well-known as a successful roaster breeder, in an article in the *Country Gentlemen*, after recording some of his early difficulties gives an axiom which is commendable. "No matter how many chickens you lose, never lose your courage."

#### The Origin of Rumpless Fowls.

M. G. Tibou, of the Berne (Switzerland) University has made anatomical and embryological studies into the origin of rumpless fowls. The conclusion arrived at is that this is due to the atrophy of the uropygium and caudal vertebræ. Though the rudiments of the caudal vertebræ can be seen in the young embryo, these disappear between the ninth and tenth day of incubation.

#### How to obtain early eggs.

Tests have recently been made in France as to the influence of various foods on ducks in respect to egg production. Those fed on fish came to lay eight days before the flesh fed birds, whilst the vegetarians were  $2\frac{1}{2}$  months in the rear. If it be correct as stated that the fish eaters produce green shelled eggs, those fed on flesh white shelled, and such as lived entirely on green food, shells pale pink, a new field is open for investigation. It would appear that fish is the natural food of ducks, especially as these were the most prolific.

#### England as a Poultry Exchange.

During the last year or two Australian white Leghorns have been shipped to England. Some went from the Eastern States, and several lots were shipped by A. H. Padman from South Australia. From information to hand, says the *Sydney Mail*, it seems that the American breeders are beginning to purchase the Australian stock, and they are buying it from English breeders. This development was to be expected, for England is only a few days' steam from America, while Australia is several weeks away. Shipping to America via London means about six or seven weeks from Australia, and the Americans aren't going to risk a journey of that length when they can get the same stock from England within a few days of placing the order.



## POULTRY KEEPING IN RUSSIA.

(From our Special Correspondent).

The development of poultry industry in Russia, and especially the enormous growth of exportation of poultry-products, which, last year, reached over 100,000,000 rbls., attracted universal attention to this, before that time, rather neglected branch of agriculture, and led to enquiries as to how great were the real profits of this industry to the small farmer, especially in the southern districts of the country, and what were the methods of poultry-keeping adopted generally on these farms.

in poultry-keeping. These courses have developed since then into "Courses for Instructors" of the Department of Agriculture, the "special courses" remaining as a preparatory stage for the same.

The photograph below represents a group of the same pupils of the "special courses" engaged in caring for small chickens in brooders of different types, the photograph illustrates the locality—a backyard on the confines of the city, in the back-



**Students at work on a Russian Educational Poultry Farm.**

[Copyright.]

It appears that these methods are far from being rational or up-to-date, the poultry being kept in a most primitive way, and the profits for the producers, owing to the imperfect system of marketing, very low indeed.

To correct such a state of things there is a great demand for large dissemination of knowledge in respect to poultry-husbandry, such instruction being all the more urgent, as the breaking up of the commune, and the settling on individual farms, promises a great increase in all the so-called sidelines of farming, and gives them hitherto undreamed of possibilities with opportunities for their further development.

In 1909 were opened in St. Petersburg, under the auspices of the St. Petersburg Branch of Agriculture, Poultry Association, and with support of Government, "Special Courses in Poultry-culture" for the purpose of training instructors and teachers

ground is seen a dwelling-house for factory workmen.

The second illustration shows some of the students making coops and fireless brooders in the carpentry class.

Next to the dissemination of instruction there is a great need in all parts of the country for better breeds of poultry. Photograph No. 4 shows a flock of young breeding stock at a small breeding station for poultry in the south of Russia, District of Kursk. Such breeding stations have proved to be of great economical value, they serve to a quick distribution of good breeds of poultry among the farmers, and as a practical demonstration of the profits of pure bred poultry over barn-yard stock.

The story of the farm represented is illustrative of many more similar stations.



The farmer, owner of the farm in question, and especially his wife, showed always interest in poultry, in so far as they built a convenient hen-house and fed the birds regularly. Still the results, although better than with their neighbours, were far from being satisfactory, owing to the poor sort kept. The farmer grasped readily at the opportunity offered to him by the Government of a flock of breeding-stock on promise of introducing improvements in his methods, especially in regard to the keeping of records as to their living and cost of feeding.

The number of fowls received amounted to twelve, four cocks and eight pullets, the farmer having besides some 50 or 60 common hens, which were allowed to remain, but the cocks had to be disposed of.

It appeared after the first year's trial that the pure-bred pullets, so far outreached in quantity and quality of eggs the barn-yard hens, that the farmer on his own accord sold off nearly all of them, keeping only 2-3 for hatching, and now has as fine a lot of pure-bred Wyandottes, which he has learnt to select very carefully, as ever be wished for.

The neighbouring farmers being interested in his work, he distributed in the first year over 200 eggs

for hatching, and about 100 chickens, in the vicinity, at a value of about twice the ordinary market price for these products.

There are several grades of poultry-breeding stations, from such small ones as farmers home-steads up to the so-called first-class breeding poultry-farms, which have a contract with the Government for supplying first-class breeding stock of different varieties of poultry for the purpose of distributing this poultry among the small breeding stations.

The idea in view is to fill up some of the most commercial poultry localities with good breeds of poultry, notably White Wyandottes and White and Buff Orpingtons in order to get uniform market produce.

The large commercial firms are very interested in the plan and promise a premium for flocks of poultry of even size and colour of plumage. This gives good hopes for the future, and it is thought it will be one of the means of securing better prices and better output for the market stock of the producer, and will help to make the industry more profitable to them.

MISS N. FRIEDE.



Russian Students learning how to make Poultry Appliances.

[Copyright.]



## THE DEVELOPMENT OF THE POULTRY INDUSTRY IN NORWAY.

By LIEUT.-COL. B. THAMS.

"The Norwegian Poultry Keepers' Association" was formed in 1884. The object of the association is to work for the development of the poultry industry in Norway by organizing a comprehensive operation for the advancement of the cause, and to propagate the comprehension of the economical significance of a rational poultry industry.

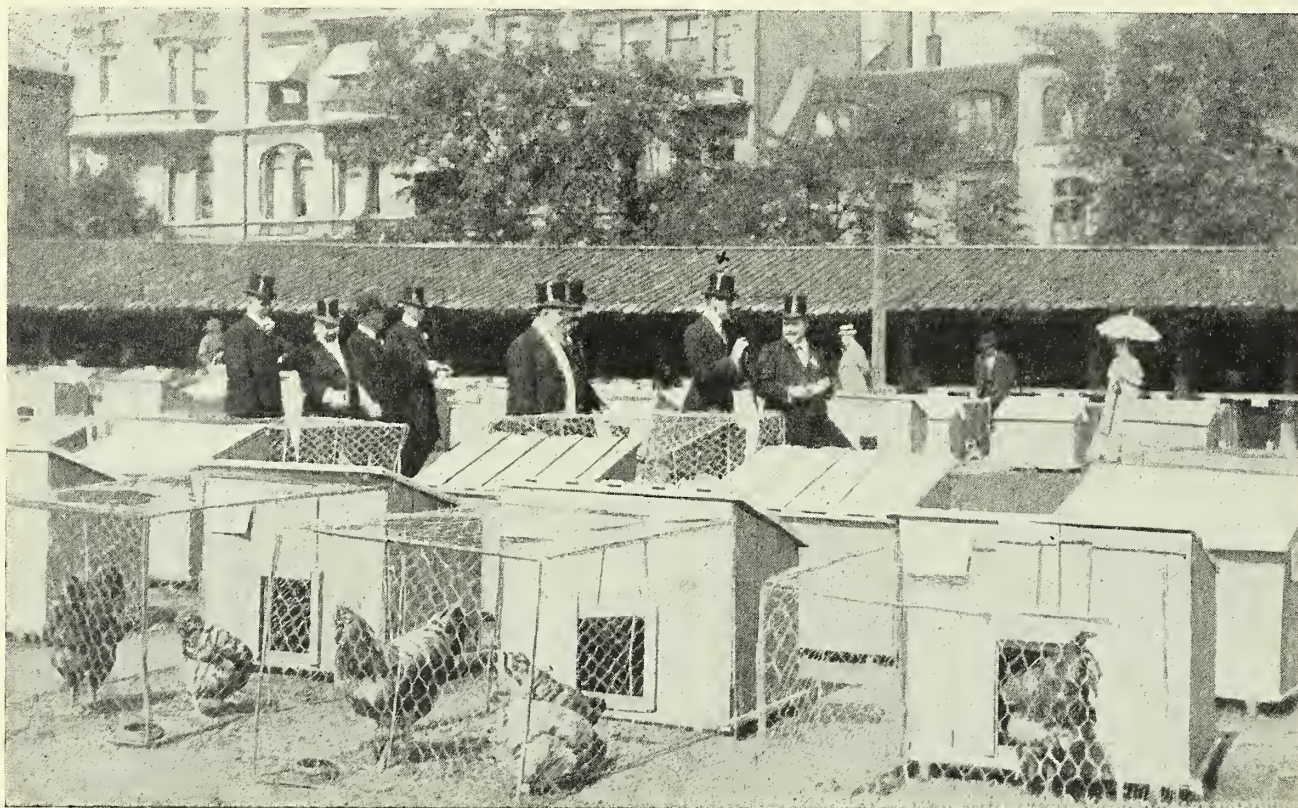
This object is attained: (1) By publishing a fortnightly paper and tracts and essays; (2) by exhibitions; (3) by lecturing; (4) by establishing stations and centres of live stock poultry; (5) by distributing to less well off people, in preference to members of the association, live stock of poultry

members, which number has steadily increased, and is now 3,500.

In the first years the association, on account of its very limited resources, could not effect much. A magazine, *Tidsskrift for Tjaerkraevl* was published and a few exhibitions were held.

In 1891, after applying for many years for a contribution from the Government, the association obtained a yearly grant of 1,000 kroner. This contribution has later by degrees been increased and at present amounts to 8,000 kr. The association in 1891 could commence realizing its plans for the advancement of the poultry industry in Norway.

The live stock was poor. Small, degenerated, and very bad layers. On January 1st, 1891, there was in Norway 796,563 fowls, 4840 geese, 5446 ducks, and 1516 turkeys. In 1908 the number had



A Norwegian Poultry Exhibition at Christiania. King Haakon is indicated by a cross. [Copyright.]

and eggs for the hatching of poultry, geese, ducks, and turkeys of good breeds; (6) by sending teachers to different parts of the country; (7) by practical and theoretical courses in poultry all over the country, particularly at agricultural, horticultural and housekeepers' schools; (8) by establishing co-operative unions for the sale of eggs and poultry produce.

The association is administered by a board of five members elected at a general meeting, held every year in the month of March. At the head of the administration is a president and a vice-president who are elected by the board for one year.

The other office holders are a secretary and an editor of the magazine of the association. The association commenced its operations with 80

grown to 1,406,359 fowls, 9898 geese, 9031 ducks, and 3151 turkeys; in other words it was about doubled.

The contribution of the government enabled the association to improve and increase the number of animals by distributing eggs for hatching, and live stock.

Such distribution is still being made. Every spring, settings of eggs in portions of 10 hen eggs, 4 goose eggs, 6 duck eggs, or 5 turkey eggs are distributed to less well-off people, and in the autumn either male birds or pens of one cock and two hens, or one pair of geese, or one pair of ducks or one pair of turkeys.

Up to date in this way the association has distributed 660 cocks and 1074 hens, 30 pair of ducks,



and 46 pair of geese, besides of eggs for hatching 12,900 hen's eggs, 202 duck eggs, and 628 goose eggs. This year the association has commenced distributing live stock and turkeys' eggs.

In Norway distances are big, and means of communication outside of railway and steamer routes difficult. To facilitate the opportunity of buying reliable eggs for hatching, and good live stock, without too long and inconvenient transport, the association in 1896 commenced establishing stations for live stock (breeding stations) for the time being only for poultry, in different places in the country. It was commenced with three stations—two for Brown Leghorns, and one for Black Minorcas. In the latter years up to 25 stations have been in activity, chiefly for breeds of brown and white Leghorns, black Minorcas, and Plymouth Rocks. In the last couple of years such stations have also been established for geese (Toulouse, Embden, and Norwegian), ducks (Pekin and Rouen) and turkeys (bronze).

It had long proved necessary to provide for dissemination of knowledge of the treatment of poultry, and of an understanding of the advantages of a rational poultry industry amongst the population of Norway. When in 1902 the association obtained a considerable augmentation of its contribution from the government the long cherished plan of sending forth instructors in poultry matters could be realized. At different seasons ten or twelve instructors were yearly despatched. Since 1907 the association has also, by a special grant, been able to render instruction in poultry industry at agricultural, horticultural, and housekeepers' schools about the country. After long and energetic work the association in 1909 at last succeeded in introducing rational poultry industry as a subject of instruction at the agricultural high school of Norway.

For a great number of years it has been an object for the exertions of the association to have the sale of eggs properly arranged by weight and according to the co-operative system. Although the association has worked long and energetically to establish co-operative unions for the sale of eggs, and although a large number of smaller local societies have sprung into existence, distributed all over the country, the association has not yet succeeded in combining these into one general co-operative union for the whole country. Such union will, however assuredly be established this year.

That the exertions of the association—the only one that is working in the matter in Norway for the advancement of the poultry industry—have not been in vain, will be seen amongst other things, from the fact that the import of eggs which was steadily increasing up to the year 1897, when the amount reached 1,250,000 kilograms, has since steadily decreased till now the total amount does not exceed 230,000 kilograms, of which about 50,000 kilograms are for technical purposes. The export is still quite insignificant—only about 5,000 kilograms.

## POULTRY FARMING IN EUROPE.

[Some interesting information with regard to the poultry industry in several countries of Europe is given in the *Bulletin of the Bureau of Agricultural Intelligence and Plant Diseases*, February, 1912. EDITOR.]

*Italy.*—Although carried on exclusively by small farmers with an utter absence of any scientific basis or system of rearing, and without any attempt at organisation in the sale of produce, poultry farming in Italy is of great importance. The nett exportation (*i.e.*, surplus of exports over imports) of the products of the industry in 1911 amounted to £506,000 in the case of live and dead poultry, £1,197,000 worth of eggs, and £328,000 worth of feathers. During the last few years, however, the imports of fowls have increased and the exports of eggs have decreased, owing, it is stated, to increased home consumption, and not to any decline in the industry. Italy possesses excellent breeds in the Ancona, the Leghorn, and the Valdarno, the first two for egg production, and the last for the table. The improvement in these breeds has been greater in foreign countries, however, than in Italy. In the case of a farm in the province of Ravenna, which kept records, the average annual net income over three years was 2s. 4d. per hen, with an annual production of 75 eggs, and annual cost for food of 2s. 2d.

*France.*—In 1875, France was about the only country that supplied England with eggs, and the latter then imported them to the value of from £1,200,000 to £1,400,000 per year; but now the imports of eggs into France far exceed the exports, as will be seen from the following figures:—

			Imports.	Exports.
			cwt.	cwt.
1896	...	...	126,980	341,900
1910	...	...	515,400	168,325

*Russia.*—Poultry farming has made rapid strides in Russia during recent years, largely owing to the active steps taken to promote it by the Imperial Poultry Rearing Society. This Society consists of a central body at Moscow, with fifty branches in various provinces. Since its foundation in 1896 it has organised 300 poultry shows.

Russian exports of poultry and eggs are considerably larger than those of other European countries, but this is in great measure due to the size of the country and to the fact that the comparatively large tracks of land under cultivation facilitate the rearing and feeding of poultry at small cost.

For commercial purposes the Orpington, Wyandotte, Langshan, and Plymouth Rock are chiefly used; the last-named are specially plentiful in the Government of Moscow. The Rouen type predominates over all other foreign breeds of duck. As regards geese, Russia has several breeds of great value from an economic standpoint.



In the Volga territory, as well as in the west of the Empire, there are large establishments for fattening geese. In the Governments of Tambow and Woroesch the geese are frozen when killed, and kept till the following spring to be exported when market supplies are falling off. Fowls are treated in the same manner, the town of Kursk, the central market of southern Russia, supplying them alive in large quantities.

Since the construction of railways in central Russia, the exportation of eggs has become even more extensive than that of poultry; in 1910 2,998 million eggs were exported.

The Russian Government is trying to encourage poultry farming by granting travelling scholarships on condition that the holders of them shall organise special courses of instruction as soon as they return to Russia.

As a consequence of the low price of her eggs, Russia is gradually gaining the ascendancy on all the foreign markets.

*Germany.*—The Government aid for the promotion of poultry farming (chiefly on peasant farms) amounts to nearly £7,000 per annum in Prussia. In this and other states of the German Federation, experimental schools have been founded having a twofold aim, viz., poultry-rearing and training for the same. Small breeding centres have also been formed, known as "Zuchtstationen" and "Muster-Geflügel-Höfe," under the management of the most active among the agriculturists. About 3,000 of these "Zuchtstationen" exist in Germany 2,300 of which are given up to poultry farming.

*Belgium.*—In Belgium, where most of the farms are less than 25 acres in size, poultry-rearing has increased in a remarkable degree, owing no doubt to the united efforts of the members of the "National Federation of the Poultry-rearing Societies of Belgium," of which the number of branches rose from 29 to 131 and that of its members from 2,108 to 6,630 between 1898 and 1909. The Government gives an annual grant of £480 to this Association, in addition to which it provides for elementary courses of instruction in poultry farming. Belgium has made a speciality of rearing fowls for the table as well as of fattening for export.

*Holland.*—In Holland, too, small farms predominate, few of them being larger than 247 acres, so that poultry farming has been similarly taken up there. The "Dutch Association for the Rearing of Poultry and Rabbits," of which the headquarters are at the Hague, was started eight years ago; it now numbers 15,000 members, with 233 branch associations. During the last four years it has formed four co-operative societies, with 8,000 members, for the sale of eggs and poultry. This industry is, however, still chiefly carried on without co-operation.

*Denmark.*—The number of fowls reared in Denmark increased from  $4\frac{1}{2}$  to  $11\frac{3}{4}$  millions between 1888 and 1909, so that there are now 439 fowls to every 100 inhabitants; the chief breeds are the

native, the Italian and the Minorca. Special attention is given to the production of choice eggs for exportation. This is carried on by associations, comprising 500 districts with 40,000 members. These societies have served as a model for the formation of similar societies in North Germany and Ireland.

Poultry-rearing in Denmark is carried on under careful Government supervision, three officials having been specially appointed to give instruction in poultry-rearing in the rural districts.

### International Exhibition at St. Petersburg.

From November 2nd to 9th next, a great International Exhibition will be held at St. Petersburg, by the Imperial Russian Poultry Society, which is under the presidency of the Grand Duke Nicholas. In this will be included pigeons, cage birds, rabbits and goats, together with other sections including appliances. The entry fees for poultry are about 7s. per pen consisting of a cock and one or two hens, inclusive of food during the time of the show. At the last International Exhibition held in St. Petersburg thirteen years ago the number of exhibits was very small indeed, and it may be hoped that the opportunity will be taken this time of making a representative display. In view of the possible trade which can be done with Russia in breeding stock, it is to be hoped that strenuous efforts will be made to take advantage of this exhibition, which might fitly be organised by the Poultry Club. Particulars, in England, can be obtained from the Board of Agriculture, 4, Whitehall Place, S.W., and application for entry forms should be addressed to the Secretary, Imperial Museum of Agriculture, 10, Fontanka, St. Petersburg.

### Poultry at Farm Institutes.

In a circular addressed by the Board of Agriculture and Fisheries to the County Education Authorities in England and Wales, the attention of the last named bodies is called to the proposed grants from the Development Fund for the establishment of farm industries, which are intended

(1) To secure the employment of an adequate number of competent teachers in *all* the various branches of instruction in agriculture and kindred subjects, and

(2) To provide such new buildings as may be required to enable short courses of instruction to be given, and to serve as centres from which the itinerant and miscellaneous work of the teaching staff can be carried on.

As a later part of the circular, short courses in poultry-keeping are specially mentioned, and we have italicised the word *all*, in order that such may be kept to the fore. We look to the Board, strengthened by public opinion, to see that no Farm Institute is established without adequate provision of poultry instructors, and that there shall be a well equipped poultry yard the latter of which is not mentioned. To train the teachers the National Poultry Institute will be imperatively needed.



## FANCIERS AND FANCY MATTERS.

By WILLIAM W. BROOMHEAD.

## THE "COMBINED" SHOW.

The full title is somewhat unwieldy to form a heading to this note, so I have abbreviated it. I refer to the event held at Sheffield, under the title of the "Combined Specialist Clubs' Show," and which had a somewhat unhappy ending. Evidently some fanciers are of opinion that an exhibition of this nature *can* find a place in the year's list, and it has been suggested that such an affair run at Belle Vue, Manchester, would be an unqualified success. It was hinted that perhaps Mr. John W. Hirst—the popular secretary of the present Manchester series—might be persuaded to give the matter his serious consideration; and that gentleman has said that, provided it is the unanimous wish of the Fancy, he would be pleased to undertake the duties of secretary.

There is some talk of this United Specialist Club Show being held about the second or third week in December, but such a late date would not, I fear, be a happy selection, and some time in November would be much better. However, if anything is to be done in the matter this season it should be pushed ahead without delay, and those interested in the subject should communicate at once with Mr. Hirst, at 28, Queen Street, Albert Square, Manchester.

## SPECIALIST CLUBS.

I see that an old secretary has been chatting on specialist clubs, and telling some of the officials

just what they should do to keep their clubs moving. Says he, "There is no disguising the fact that the Fancy in general wants rousing," to which we might answer with one accord "Aye, aye, sir." These old fogies are always telling the younger generation that things are not what they were.

And yet, if one goes to the trouble of studying the history of the Fancy for the past two or three decades, it is only to find—what? That we are better off than they were then, and the Fancy is less in need of reforming than it was in "the good old days." However, there will always be those who will tell us of the error of our ways, since some folks are hard to please.

## POLISH FOWLS.

Writing of Dummies reminds me that with the increased interest taken in the old breeds, a club has been formed for the Poland, and classes will be guaranteed for this old-time favourite at the Dairy and the Palace Shows.

Mr. Sam Marson, of 11, Bar Lane, Astley Bridge, Bolton, Lancs., is acting

as hon. secretary, and he hopes that all who fancy the breed will support the club. Time was when the "top-knots" were indeed "top notchers," but of late they have fallen on evil days. However, with the desire there appears to be now-a-days of reviving some of the old breeds, it is likely that the Poland will come into its own again. Writing of it Mr. Marson says that after having studied all the available information he is of opinion that Poland is the correct name for the breed. "I have always



"COBALT."

[Copyright.]

A celebrated American prize-winning Silver-pencilled Wyandotte Cocker.



thought," he says "that the word Polish was generally applied in the adjective sense. This need not, however, be a bone of contention, the main desire being to bring this famous old breed more prominently before the public."

#### SHOULD POULTRY JUDGES BE LICENSED ?

I see that an attempt is being made in America to bring the above question to the fore. True it is that the American Poultry Association has for some years had its list of accredited adjudicators, although its licensed judge rule has never been popular, and latterly little has been heard of the matter. Some years ago our own Poultry Club discussed the question and went so far as to appoint a sub-committee for the purpose of considering it. It apparently never did anything, however, possibly because it was far too knotty a problem for it to tackle. Nevertheless, there are those in the Fancy who are quite keen on the licensing of poultry judges, and perhaps this note may be the means of their reviving it.

#### THOSE CUPS !

At Paisley Show last month among the special prizes offered were two silver cups or £5 for the "best cock exhibited at the show most suitable for producing fowls for laying and table purposes" and for the "best hen exhibited at the show most suitable for table and egg-producing purposes." These cups I see went to the winning Black Orpington cock, and the first prize Indian Game hen. With the awarding of the former no one can complain, since the Orpington is a recognised general purpose breed; but that the Indian Game hen is "most suitable for table and egg-producing purposes" is really something quite new. She is a decidedly bad layer, while for edible purposes she is by no means a first rater. Granted the Indian Game cock is a most suitable male bird to cross with hens of other breeds for improving table qualities, but to cross the Indian Game hens is not likely to improve any properties. At the same show, class 21 was for the "Best Plucked Dead Fowl" and intending entrants were solemnly cautioned that "exhibitors in this class are ineligible to compete for the special prizes offered by the representative of the late James Coats, Junr.," the said specials being the two cups afore-mentioned! Really one would hardly expect a dead bird to be "suitable for producing fowls for laying and table purposes."

#### COLUMBIAN WYANDOTTES.

Members of the Columbian Wyandotte Club have recently been notified by their committee that at a meeting at the late Crystal Palace Show, it was decided that the black in the hackle of the females should resemble that in the male, but should be as broad as possible. It is pointed out that the black in the hackle of a Light Brahma hen should run to a round end surrounded by white, while in a Columbian Wyandotte it should run to a blunt point surrounded by white. Some fanciers

have thought that it is a distinction without a difference; but there is a decided difference between this round end and blunt point, almost as much difference as there is between the breast lacing and the neck-hackle striping of a Silver Wyandotte. However, to resume. I believe there is something about "Better late than never," and apparently "the powers that be" in the Columbian Wyandotte Club had it in mind when they notified their members per circular as to the style of hackle to be adopted. One would have thought that the proper time to let them know would be when the breeding season was commencing, and not when the show season began. There would then have been time for fanciers to mate their birds for what was required since, be it remarked, that hackle marking is bred and not made.

#### DUMPY FOWLS.

There is a move afoot to give the old Scottish Dumpy a "boost"—that is, if this quoted word is the up-to-date expression for boom. Anyway, there is a feeling among Scottish fanciers that something should be done for this old-fashioned breed, if merely to let the Fancy at large know that the English and American breeds are not the sole possessors of the earth. No doubt about it, there has been quite a revival of interest in Dumpies this past season, and the entry of fifteen birds at last year's Palace Show was something out of the ordinary. And there is no getting away from the fact that the Dumpy has something of a claim to recognition as an old breed. Why, some twenty years ago—that will be prior to the debut of some of the "great" authorities in the Fancy to-day—the only breeds that were thought much of in South Africa were Dumpies and Rumpies, both of which had quite a reputation as layers. The former, known at the Cape as the "Kortpootje" were practically minus legs, while the others, known locally as the "Stompstairtje"—Cape Dutch, these terms—were minus tails. It is interesting to note also that other names for the Dumpies are Bakies, Golaighs, and Crawlers. The breed used to be quite a favourite in Scotland long before the late Mr. Lewis Wright wrote his great work "The Illustrated Book of Poultry," hence it is pleasing to find that the Scotsmen are going to take it up again. A club is now being formed, and the subscriptions, which are only three shillings a head, are to be used towards guaranteeing classes at a few shows. Full particulars of membership can be obtained of the hon secretary, Mr. James W. Brown, Rosepark, Fallside, Bothwell, Lanarkshire.

#### AN OLD SCOTTISH FANCIER.

I see that at the recent Dumbarton Show held in the Boghead Park, Mr. James L. Shankland was one of the poultry judges. At this event, it may be mentioned, the old-fashioned system of dual judging is still in vogue, and Mr. Shankland's co-worker was Mr. John McKay. It is not frequently, nowadays, that one sees the former gentleman officiating in the judicial capacity; and yet he is one of the



most skilful of adjudicators, besides being among the oldest of Scottish fanciers. For some years now, Mr. Shankland has been the king of Scottish Hamburg breeders, and he has a very "soft corner" for his favourite; in fact, despite the comparatively small following it now enjoys, there is no breed in his opinion to equal it. No one knows better than he when the Hamburg was the most popular breed of the day, times when the English fanciers had to cross the border to pick up their Palace winners. Things have altered since then, albeit quite a few champions in the Hamburg Fancy are bred annually across the border, and I have seen some at the Scottish shows which were as near the ideal hundred points as any bred in England.

or more, is it not time that the "Dairy" and other leading agricultural shows, should offer special prizes for pedigree laying strain type, in Orpingtons, Wyandottes, Leghorns, and Anconas, etc., etc. In order to emphasise the importance of the laying-strain-special the prizes offered must be of the highest value and honour to win. Since all England is interested in the poultry industry and the provision of laying-strain-special would appreciably benefit the British egg market, each county might well contribute its laying-strain challenge cup for competition in a defined area, and we well might hope that The Dairy, The Royal, Birmingham, and the Royal Counties would provide laying strain challenge cups for each specialised breed, under such conditions that



**A Secondary Breeding Station at a Farmstead in Southern Russia.**

(See article by our Russian correspondent on page 490.)

[Copyright.]

## POULTRY SHOWS AND THEIR USES.

*To the Editor of the ILLUSTRATED POULTRY RECORD.*

Sir,

Now that pedigree laying-strain has evolved a type of hen all its own, and inasmuch as the pedigree and type of feather-strain stock, is inconveniently at variance with the type asserted by nature, it may be hoped that all poultry clubs will unite and effectively recognise this important factor towards the success of profitable poultry culture. The ably expressed and unbiassed article on poultry shows and their uses, by Mr. Edward Brown, F.L.S. appearing in the May issue of the *I.P.R.* states the case clearly and fairly, showing how the great agricultural poultry shows of England are of comparatively little economic value to poultry culture. Moreover, as such facts are fully recognised and acknowledged by all breeders of poultry, used to feeding a thousand laying hens

laying-strain poultry shows would in time be fully recognised as an important balance to laying competitions, and as a reliable market for utility breeding stock.

In order to encourage definite and immediate action, I have much pleasure in offering for competition at the next Dairy Show, in the name of The National Service and County Poultry Club, that I have the honour to direct, the sum of £5 to £25, conditionally that such presentation be covered by five other subscriptions of equal value. and the fund thus formed, shall be applied to the provision of laying strain challenge trophies.

Faithfully yours,

FRANCIS P. PEIRSON-WEBBER,

County Adviser in poultry culture,

Warwickshire and Northamptonshire.



## BRITISH PRODUCTION OF EGGS AND POULTRY.

By EDWARD BROWN, F.L.S.



THE Report which has just been published of (1) the Poultry Census taken in 1908 and (2) the results of enquiries made in the same year for the purpose of estimating the total agricultural output, is to be welcomed. It is the first official attempt to secure information as to the latter, and a resumption of the enumerations in respect to poultry after a period of twenty-three years, thus bringing Great Britain into line with other countries. I can only hope that now the step has been taken, we may have at regular intervals, say, every fifth year, a similar census. In that case another will be due in June, 1913. Mr. R. H. Rew, C.B., Assistant Secretary of the Board of Agriculture and Fisheries, is to be warmly complimented upon this report, which must have involved an enormous amount of labour since the schedules were issued four years ago, more and more evidenced as it is carefully studied.

It is not my present purpose to deal fully with the Poultry Census, but I may express a measure of disappointment that the county statistics are not given, as is usual in the annual returns of other classes of farm stock. The census figures can be accepted as they stand, and their import must be pressed home upon our farming community. As to the county statistics such figures should be available without much difficulty. If a supplementary return were published giving these for the Poultry Census of 1908, the value of the present publication would be greatly enhanced. A further point is that calculations made as to averages should be based upon adult fowls, not inclusive of young birds. June is a bad month to enumerate poultry, though it does give some idea as to the number hatched and sold.

The facts revealed by this census is that of adult fowls the Poultry Population of Great Britain, on June 4th, 1908, per thousand acres of cultivated land, was as follows :—

	England	Wales	Scotland	Gt. Britain.
Fowls	560.82	448.8	494.44	538.41
Ducks	30.17	36.95	38.03	31.94
Geese	7.03	24.75	2.47	7.85
Turkeys	5.94	8.96	5.55	6.17

From this we find that in Great Britain there is only a fraction above half an adult fowl per

acre of cultivated land ; that there is one adult duck to 31 acres ; that there is one adult goose to 127 acres ; and that there is one adult turkey to 162 acres of cultivated land. It is small wonder, therefore, that we have to pay £12,400,000 annually for eggs and poultry produced and grown outside our own shores. Of all the four grades of poultry added together there were in 1908 not more than 587.49 adult poultry to every 1,000 acres of cultivated land.

I find that in 1911, the last figures available, the average in Ireland of all poultry was 979.77 adults per 1,000 acres, so that the Green Isle was 66 per cent. better in 1911 than Great Britain in 1908.

Turning to the estimated value of production we are in the region of doubt, not to say non-acceptance of the figures published, which are, in my judgment, considerably below what may be reasonably assumed. As will be seen by the subjoined quotation the estimated value given in this report of the poultry crop of Great Britain was, in 1908, £5,000,000 ; that is on holdings of one acre and upwards :—

“The numbers of poultry on the farms on June 4th being based on the annual returns made by each occupier may be regarded as fairly complete, but the figures of egg production, calculated from a more limited number of returns, may be subject to a wider margin of error. The returns from which they are calculated were obtained from occupiers having 50 or more fowls, or 10 or more ducks, geese, or turkeys. Many of the smaller poultry-keepers would consequently be excluded, while generally speaking all the larger farms would be included. There has been in recent years a steady diffusion of interest in poultry among farmers, and on many medium-sized and even large farms serious attention is now given to this long neglected branch of agricultural production. But it is undeniable that on a very large number of holdings fowls are still kept in a casual manner, and the effective egg production per hen per annum is often very small. The annual production of eggs works out at an average for the 15½ million hens on farms in Great Britain at 72 per hen. The total egg production from farm poultry may appear somewhat disappointing in proportion to the total stock, and it must further be remembered that the supply which comes into the market is very much less. The consumption of eggs and poultry in over 5,000,000 households supplying their home demands at ‘cost price,’ and therefore on a relatively lavish scale, makes a very large initial inroad into the total supply. It may indeed be said that to a considerable extent the output of eggs and poultry, *i.e.*, the quantities sold off the farms—represents the surplus remaining after the producer’s own requirements have been satisfied. The total value of the output of eggs and poultry from the agricultural holdings of Great Britain is calculated from these returns at about £5,000,000. This sum, it must be repeated, takes no account of poultry kept by cottagers, residents in towns and others



not within the scope of the agricultural returns. The aggregate production thus excluded must be very large, though, again, it may be assumed that the great part of it is consumed by the poultry-keepers themselves."

How this amount has been arrived at I am unable to say. Accepting the stated average of 72 eggs per hen per annum, which is probably not wide of the mark for ordinary farm fowls, the 15,499,000 adult hens would produce 1,115,928,000 eggs, or 9,299,400 great hundreds; and the 787,000 adult ducks, at an average of 40 per annum, would produce 31,480,000 eggs, or 262,333 great hundreds. I assume that the average value of the former would be 9s. per 120, and of the latter 8s. per 120, in justification of which it may be mentioned that in 1908 the average value of Danish eggs imported was 9s. 3 $\frac{3}{4}$ d. per 120, of French 8s. 6 $\frac{3}{4}$ d., and Italian 8s. 4 $\frac{1}{2}$ d., all of which would include a considerable proportion of preserved. Therefore, my figures are probably below the mark. I take it goose and turkey eggs were used for hatching, and do not put down anything for the these.

On June 4th, 1908, the young birds recorded were as follows.—

Chickens	-	-	-	14,913,000
Ducklings	-	-	-	1,934,000
Goslings	-	-	-	459,000
Turkeys	-	-	-	199,000

It may reasonably be assumed that an equal number, either of old birds, whose places would be taken by the youngsters, or of those enumerated, would be killed, so that is a basis for estimating the poultry crop. These do not, however, include, I take it, such as had been killed previously, or would be hatched after June 4th. A modest and safe computation would add 8,000,000 chickens to the number stated, and 1,000,000 ducklings, leaving goslings and young turkeys as they are shown. As a justification for which it may be submitted that even where the main object is egg production, at least one chicken would be bred for every adult fowl kept, and in addition there are large numbers of those who produce annually ten or more chickens to every hen, the majority of which are for killing.

The following is, upon the census figures published, a fair estimate as to values:—

Eggs:				
Fowls	9,299,400	gt. hds. @ 9/-	£4,184,730	
Ducks	262,133	„ @ 8/-	104,933	
				£4,289,663
Poultry:				
Fowls	22,913,000	@ 1/6	£1,718,475	
Ducks	2,934,000	@ 2/-	296,400	
Geese	459,000	@ 3/-	68,850	
Turkeys	498,000	@ 7/6	186,750	2,268,475
				£6,558,138

Thus it will be seen that the estimated prices of poultry are low, but such is desirable, as I do not wish to exaggerate. The object is to represent a fair value, obtainable by the farmer, even in the more remotest areas, or if consumed in his household. That more is realised both for eggs and poultry by producers living near the great centres of population is certain.

Thus it will be seen the official figures are £1,558,000 below what should be. As a further proof of what is here stated, Ireland in 1910 had 13,987,305 adult poultry, or less by nearly 5,000,000 than recorded for Great Britain in 1908, and 10,351,710 young poultry, or less by 7,452,000 than recorded for Great Britain in 1908. Yet she was able to export eggs and poultry in 1910 to the value of £3,671,173. If to this sum is added the value of home consumption the total production would be approaching £5,000,000. That being so, the estimate made in this report is, considering the higher values by nearer markets in Great Britain, much below what is evidently the case. In fact, such figures would suggest that my own estimate is too low by nearly £1,000,000.

A further point is that *pro rata* the number of poultry in Britain is 50 per cent. greater than in Ireland, and taking the higher average values in the former on the basis of £5,000,000 for Irish production, the British total value should be nearer £8,000,000 than the £5,000,000 estimated in this report.

As already mentioned the British returns do not include any occupations below an acre. When we consider the vast number of small poultry keepers of all grades, whether for home consumption or sale, the huge trade done in sale of stock birds, eggs for hatching, day-old chicks, etc., as well as eggs and poultry for consumption, a conservative estimate would be that these are in value £2,500,000, thus bringing the total value of the poultry crop of Great Britain to at least £9,000,000 per annum. Adding the Irish, the poultry industry represents £14,000,000 annually as the production of the United Kingdom, or, a total consumption of £23,000,000 per annum. With traders profits on sale, the vast trade done in appliances of all kinds, food stuffs, etc., exhibitions and fancy poultry, the total value of our pursuit means returns of at least £30,000,000 yearly.

#### American Poultry Association.

From the programme printed in our transatlantic contemporaries, this Association is going to have a full and interesting series of meetings at Nashville, Tennessee, from August 9th to 17th, and the Southern visit may be regarded as of great importance.





**A BLACK ORPINGTON COCKEREL.**

The Black Orpington is, of course, a variety of the world-famous Orpington breed. While not quite so popular, perhaps, as either the Buff or the White variety, it nevertheless possesses many admirers. The hens are good layers, quiet sitters, and reliable mothers; the chickens are hardy and for a heavy breed grow fairly quickly. The edible qualities are good, particularly in quite young chickens.



## THE RIGHT AND THE WRONG WAY OF SHOWING CHICKENS.

By WILFRID H. G. EWART.

THE season of chicken shows is now upon us with all its doubts, questionings, and difficulties. So much has been written upon the subject that we need not concern ourselves further with its rights and wrongs. Showing chickens is difficult enough in itself—indeed, there is probably no branch of the poultry industry which offers so great opportunities for genuine technical skill. On this account the novice justifiably considers himself at a disadvantage. It is all very well for professional fanciers to say—as one is reported to have said the other day—that the new-comer stands at no disadvantage, being often a good deal more artful than the professional himself. Facts do not show the alleged artfulness to be attended by success, while it surely stands to reason that men of long practice and experience must hold an advantage over the beginner.

Size and bulk are, I think, the chief stumbling-block. All question apart of hatching before the proper date, it is no easy matter to get a bird actually big enough—putting merit aside—to do himself justice in the show-pen. And let me scotch at once the idea that mere precocity is the same thing as forwardness and growth. The latter can only be obtained by skilful rearing; the former may be achieved in many ways.

Nobody can doubt that the secret of rapid growth is feeding. We are not considering the early days of rearing which are past. Nor do the birds at that stage lack for care and attention. It is when, having reached the cold-brooder, they are rapidly feathering, the real show preparation begins. And this is where the inexperienced make mistakes. The main idea should be to give frequent small feeds and to give only real growth-promoting stuff. A diet of this sort cannot, I believe, be beaten for three-months chickens destined for the show-pen: 6 a.m., mash composed of fine biscuit-meal scalded, and mixed with finest Scotch oatmeal, sharps, and bone-meal; 9, bread-and-milk in troughs; 12 mash afore-mentioned; 4, oatmeal, sharps, and bone-meal mixed with skim-milk; 6.30 p.m., good whole small wheat. At the first and last feeds, give as much as the birds will eat, otherwise about half a dozen handfuls will suffice for a flock of thirty.

Let me add that such a diet as the one named cannot be adopted permanently, partly on account of expense and partly because of its richness. It will, however, be found to promote not only growth and bone, but also "condition," which is hardly less important. I am convinced of the necessity of milk-feeding show-chickens from their very early days. Not only will they eat bread-and-milk with the utmost pleasure, but, in my experience, this certainly acts as an appetiser. Another way of creating that all-important thing—a good appetite—is to let the soft food stand covered over for twenty-four hours before using it. This should not be done, however, if it is made with milk.

Green-cut bone at mid-day is another great thing; but the whole question of feeding is bound up with condition, which is a more important asset to a young bird than to an old one. I believe grass plays a large part here. The fresh, young grass of early summer seems to have a certain vivifying effect upon the plumage and health. Of course, the young birds must be shaded at this time, especially whites. Give them their liberty, however, up to 10 a.m., and after 4 p.m. Keep the cockerels out of sight of pullets if possible, and never let them intermix. At three months one can usually tell whether a bird will be fit or good enough to show a few weeks hence; a promising specimen will often be much benefited by a preliminary wash. This gets rid of much sap and quill-dust, thereby offering a freer passage to the young feathers.

Then there is the question of training. How many novices' chickens are spoilt by awkwardness and wildness in the show-pen, whereas an admirable *savoir fair* characterises the professional's exhibits. Plenty of handling and practice in the training-pen is really the only "secret" used by the latter. Beginning a fortnight from the show, pen the youngsters for three hours daily. Do this when they are hungry, and they will very quickly learn to come to the front, and, what is even more important, hold themselves up. A most necessary thing at this time is to check any desire—especially seen in Plymouth rocks, Langshans, and Minorcas—to "stand in" at the hocks. Always entice the birds with small pieces of meat when in the pens, and while they reach for these knock the hocks apart quite lightly with a judging-stick. Done repeatedly, this will have the desired effect.

The actual exhibiting of a chicken demands simply the same care and thoroughness as that given to a fowl, and need not be dwelt on here. A good way of polishing a bird up is, first, to rub over the plumage a slightly oiled rag, then to groom the feathers with silk. If a silk handkerchief be folded round a square of cotton-wool, a handy pad will be the result. Let me, by-the-by, remind the exhibitor that under the Poultry Club rules no ring or circlet other than that provided by the Club (*i.e.*, the Conference Ring), may be worn; toe-punching marks are, however, permissible. Many a novice has forgotten these disqualifications, and so lost a prize.

While the main points in showing and in preparing chickens for show have been enumerated, a great deal of the art of the thing lies in picking the right bird at the right time. When you have a flock of chickens of more or less the same size and quality running together, it is no easy matter to determine which will come to hand at the required moment. One thing, never choose a bird because of its precocious ways or head-points. Rather pick something in the bloom of health, with plenty of substance, breadth, and bone for this is invariably the sort that wins.



## ROTATION OF PRODUCTION.

(AUGUST).

By J. W. HURST.

### Fowls.

Harvesting operations mark the commencement of an important food saving season, in which connexion the opportunities of the farmer give him a considerable advantage over the smaller producer whose range includes no arable land. Stubbling is of course particularly applicable to the requirements of those who rear geese and turkeys, but inasmuch as the recent "Output" report of the Board of Agriculture shows the immense preponderance of fowls, it is evident that the benefits would be largely lost if the "common domestic" were not allowed to follow the reaper. The approximate proportion of fowls to arable land in Great Britain is about two to the acre, and including other feathered stock it is less than three; so that there is plenty of food available on the harvest fields which may be most economically utilized by colonies of growing chickens, or laying hens. Where eggs are wanted from which to hatch chickens for the autumn and winter demand any excessive features of the hens must be carefully guarded against, their condition being frequently ascertained by handling when on the perch. But broody hens are not always as available or reliable as the eggs, and it is usually advisable to use one or more incubators through the summer to maintain the needed succession of production. Both hens and incubators must, however, be very carefully managed in hot weather. Nest boxes must be shadily situated and very well ventilated, whilst without the taking of extraordinary precautions incubators are almost unworkable above ground in the heat of summer.

### Ducks.

When in moult the stock birds must be allowed a generous diet, but after the change of plumage a free grass range is beneficial and will reduce the necessity for hand feeding to a minimum. What food is given in such circumstances may very well consist of rice, bran, and middlings for the soft mixture; but in many cases when the conditions are suitable no soft food is needed, a sprinkle of sound grain being ample. In any case it is imperative to avoid overfatness, otherwise the birds will be out of condition when they should recommence laying. Special feeding for egg production will come later. The hot weather is liable to be injurious, especially to young birds, unless their surroundings are adapted to their needs in summer. For ducks there is no shade equal to that afforded by overhanging foliage, and if the water and the grass are both thus partially protected so much the better for the well-being of the stock.

### Geese.

There is still a sufficient demand for geese in September to encourage the special preparation of birds for killing during that month, but the numbers should be limited by experience of the past and the indications of future possibilities. The seasonable consumption is, however, so comparatively small that it is generally inadvisable to prepare any great number of birds for consignment to a large central market, without some previous knowledge or inquiry. It is easy to over-supply an open market with these birds, and there is often more certainty in a local trade. Forward well-grown birds should be selected for the purpose, because the remaining weeks will be required to improve condition and cover an existing frame, rather than to grow one, and although great size is not essential it is true of most markets that a relatively large bird is preferred to a small one. Until the commencement of the special feeding period the aim should be to keep them in good condition—but not fat. The final treatment preparatory for marketing may vary somewhat according to the circumstances, but in no case is any great trouble involved in getting them fit for the September trade. Under some conditions they may be allowed to continue running at liberty, when the chief consideration is the amount of extra feeding required to get a desirable condition—and this depends upon the character of the run and the quality and quantity of natural food upon it. As a rule, however, some curtailment of liberty is necessary, and I have obtained very satisfactory results at Michaelmas by giving an early morning feed of Sussex ground oats and sharps, running the birds on a good grass range during the day, and giving a feed of grain in the evening. If there is plenty of grain to be found amid the stubbles, that alone will often be sufficient. Running birds may also be finished for the table by a course of feeding on meal and brewer's grains, whilst some breeders running their birds on grass feed them twice daily on oats—as much as they will eat at a meal.

### Turkeys.

Progressive treatment is the keynote of success-turkey rearing, as regards feeding, housing, and the character and extent of the range. Poults running free on a farm with their natural mother require little hand feeding, and as the young birds otherwise reared begin to cover much ground their feeding must coincidentally be regulated to balance the available quantity of insect and vegetable food on the range. Progressive freedom ensures health, from the change of ground and its freshness; whilst growth, development, and stamina are increased by the activity induced. When the poults show an inclination to fly, and, perch, they should be driven at night to a roost-house having perches at about two feet from the ground.



## THROUGH THE AYLESBURY DUCK DISTRICT.

The labours of the Provisional Committee of the International Association of Poultry Instructors and Investigators in drafting the constitution and bye-laws were relieved by many social functions. The Marchioness of Salisbury, the president of the National Poultry Organisation Society, gave a reception; Lord Lucas parliamentary secretary to the Board of Agriculture, entertained the delegates to dinner; Col. Williams provided tea on the terrace of the House of Commons; and the president and committee of the Utility Poultry Club gave a very successful dinner.

On Saturday, July 20th, the proprietors of the *Illustrated Poultry Record*, had the pleasure of

R. T. Lang, J.P., who presided at the luncheon, in the course of a brief speech said he hoped England as the result of the conference, would be awakened to the possibilities of poultry-keeping as a great national industry. Hitherto poultry-keeping was a thing of the backyard in this country, and so the English have had to depend largely upon other countries for eggs.

At Aylesbury, where a short halt was made, the party was met by Mr. C. J. Watkins, Secretary for Education for Buckinghamshire, who had arranged a visit to Mr. Weston's farm, where there were about 1,000 ducklings in various stages of growth. The duckling season is now pretty well



**Outside the Holborn Restaurant on July 20th.**

[Copyright.]

Mr. Edward Brown, F.L.S., the President, and Mr. R. T. Lang, J.P., are seen standing together on the kerb.

entertaining the delegates to luncheon, followed by a motor-car trip through the Aylesbury duck district, with a visit to Lord Rothschild's poultry farm at Tring. Among the company were representatives of the following widely-scattered countries: Great Britain, the Argentine Republic, Australia, New South Wales, Queensland, South Australia, Tasmania, Belgium, Brazil, Canada, Cyprus, Denmark, England, France, Germany, Holland, India, Ireland, Italy, Mexico, New Zealand, Norway, Russia, Scotland, South Africa, Sweden, Turkey, United States of America, and Wales. Mr.

over, otherwise Mr. Weston's stock would have been much greater. The Vale of Aylesbury has been for long the chief centre of the duck industry, and has given its name to the white English breed, which is regarded in Great Britain as one of the finest ducks known for early maturity and table properties. Of late years, however, there has been a considerable extension of the area over which ducklings are produced. Large quantities are bred and fed in other parts of Bucks, notably around Princes Risborough and Chesham, beyond Leighton Buzzard, in Beds., and in some parts of Oxford-



shire. At some of these places operations are carried out upon a much larger scale, but the methods of rearing and feeding are similar.

As a rule small "duckers" do not keep breeding stock to any extent. In fact, they have not the opportunity of doing so. Eggs are purchased for hatching, and farmers in the district lay themselves out to supply eggs for hatching, for which high prices have to be paid early in the season. Hens are almost invariably used for hatching, but incubators are being gradually introduced, especially on the larger plants. The numbers produced at each place vary greatly. There are many "duckers" who raise from 600 to 1,000 annually, while there are others who produce upwards of 10,000 in the course of the year.

which the poultry department of this estate is worked is extremely interesting. There is one central establishment where nothing but poultry is kept, while in addition there are nine homesteads—for Lord Rothschild farms over 2,000 acres—at each of which one distinct variety, and only one, is specialised in. Cockerels are supplied from the central establishment to the various homesteads, and thus the excellence of the stock is maintained in a manner which would otherwise be quite impossible. In all other respects, however, the central and the branch farms are quite separate, having no connection whatever with one another. Separate accounts are kept, and in fact, each homestead is entirely responsible for the birds living at that particular place. The head poultryman has the right to the first pick of any young stock reared at



**General view of the Central Poultry Farm at Tring.**

From Aylesbury the party proceeded to Tring Park, the seat of Lord Rothschild, where it was met by Mr. Richardson Carr, who kindly entertained our guests to tea. A visit was afterwards paid to the poultry establishment, where a very enjoyable hour and a half were spent. The Tring poultry farm is first and foremost a utility farm. It is true there is a large number of extremely fine stock birds, some of which have given a very good account of themselves in the exhibition pen, while one of the Leghorn cockerels, which until recently was mated to some very fine hens, is brother to the bird which won first prize at the Crystal Palace two years ago. The same story is true in other varieties, and while utility features are kept to the fore it must not be assumed that exhibition points are neglected. That it is possible to combine utility and fancy features has been proved on many occasions, but never have we come across a better example than at Tring. The plan upon

the homesteads, and those he selects for exhibition or for breeding-pens are debited in the ordinary way. A considerable number of breeds and varieties is maintained. Sussex are represented very strongly, there being several pens of Red, Light and Speckled; of Orpingtons there are White and Buff; of Leghorns White and Brown; while some remarkably good Indian Game complete the stock. There are also American Bronze Turkeys, Embden and Toulouse Geese, and Buff Orpington Ducks.

#### **An Australian Sale.**

Melbourne (Vic.) papers report that the well-known Australian fancier, Mr. Geo. Woodward, is clearing out, and offering for sale all his stock, poultry houses, and everything in connection with his farm. Mr. Woodward has kept a large number of breeds, and imported many high class specimens.



# TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS FOR THE FOUR WEEKS ENDING JULY 13, 1912.

## ENGLISH POULTRY—LONDON MARKETS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Each.	Each.	Each.	Each.
Surrey Chickens ...	4/0 to 4/6	4/0 to 5/6	3/6 to 4/6	4/0 to 4/6
Sussex " .....	4/0 " 4/6	4/0 " 5/6	3/6 " 4/6	4/0 " 4/6
Boston " .....	2/6 " 3/6	2/6 " 3/3	2/6 " 3/3	2/3 " 3/3
Essex " .....	2/6 " 3/6	2/6 " 3/3	2/6 " 3/3	2/3 " 3/3
Capons .....	5/0 " 6/6	5/6 " 7/0	5/0 " 7/6	5/0 " 6/6
Irish Chickens .....	2/0 " 3/6	2/0 " 3/6	2/3 " 3/0	2/0 " 3/0
Live Hens.....	1/6 " 2/6	1/9 " 2/3	1/6 " 2/3	1/6 " 2/3
Aylesbury Ducklings	3/0 " 4/0	3/3 " 4/0	2/9 " 4/0	3/0 " 4/0
Ducks .....	2/3 " 3/0	2/3 " 3/0	—	2/3 " 3/0
Goslings .....	5/0 " 6/6	4/6 " 5/6	4/6 " 6/0	4/6 " 5/6
Guinea Fowls.....	2/6 " 3/0	2/3 " 2/9	2/3 " 2/9	2/3 " 2/9
Poussins .....	1/0 " 1/6	1/0 " 1/6	1/0 " 1/8	1/0 " 1/6

## ENGLISH GAME—LONDON MARKETS.

Description.	Each.	Each.	Each.	Each.
Grouse .....	—	—	—	—
Partridges.....	—	—	—	—
Pheasants.....	—	—	—	—
Black Game.....	—	—	—	—
Hares.....	1/0 " 1/6	1/0 " 1/9	1/0 " 1/9	1/0 " 1/6
Rabbits, Tame.....	0/7 " 0/9	0/7 " 0/9	0/7 " 0/9	0/7 " 0/9
" Wild .....	—	—	—	—
Pigeons, Tame.....	—	—	—	—
" Wild .....	—	—	2/3 " 2/6	—
Wild Duck .....	—	—	—	—
Woodcock .....	—	—	—	—
Snipe .....	—	—	—	—
Plover .....	—	—	—	—

## ENGLISH EGGS (Guaranteed New-Laid).

MARKETS.	Per 120.	Per 120.	Per 120.	Per 120.
LONDON .....	8/0 to 9/6	8/6 to 9/6	8/6 to 10/-	8/6 to 9/6
Provinces.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.
CARLISLE .....	0/11	1/0	0/11	0/11
BRISTOL.....	0/11	0/11	0/11	0/11

## FOREIGN POULTRY—LONDON MARKETS.

COUNTRIES OF ORIGIN. •	PRICES REALIZED DURING THE MONTH.				
	CHICKENS, Each.	DUCKS, Each.	DUCKLINGS, Each.	GESE, Per lb.	TURKEYS, Per lb.
Russia .....	—	—	—	—	—
Belgium .....	—	—	—	—	—
France.....	—	—	—	—	—
United States of America ...	—	—	—	—	—
Austria .....	—	—	—	—	—
Canada, .....	—	—	—	—	—
Australia.....	—	—	—	—	—
FOREIGN GAME. LONDON MARKETS.	Price Each During Month.	IMPORTS OF POULTRY AND GAME. MONTH ENDING JUNE 30TH, 1912.			

## FOREIGN GAME, LONDON MARKETS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Capercailzie .....	—	—	—	—
Black Game .....	—	—	—	—
Ptarmigan .....	—	—	—	—
Partridges .....	0/6 to 1/3	—	—	—
Quail .....	1/0 " 1/6	—	—	—
Bordeaux Pigeons .....	0/7 " 0/9	—	—	—
Hares .....	—	—	—	—
Rabbits .....	—	—	—	—
Snipe .....	—	—	—	—

## IMPORTS OF POULTRY AND GAME, MONTH ENDING JUNE 30TH, 1912.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Game.	Poultry.
Russia .....	£10	£3,826
France .....	—	£2,693
Austria-Hungary .....	—	—
United States of America .....	£111	£2,509
Other Countries.....	—	£1,351
Totals.....	£121	£10,379

## IRISH EGGS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	8/6 to 9/3	8/9 to 9/6	8/9 to 9/9	8/9 to 9/9

## FOREIGN EGGS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
French ...	8/6 to 9/3	8/9 to 9/9	8/9 to 9/9	8/9 to 9/9
Danish ...	8/3 " 9/6	8/9 " 9/9	8/6 " 8/9	8/6 " 9/9
Italian ...	8/3 " 9/0	8/6 " 9/6	8/6 " 9/6	8/6 " 9/6
Austrian ...	6/9 " 7/6	6/9 " 8/0	6/9 " 8/0	6/6 " 8/0
Russian...	6/9 " 7/6	6/6 " 7/9	6/3 " 7/9	6/0 " 7/9
Totals .....	1,835,569	£700,883		

## IMPORTS OF EGGS, MONTH ENDING JUNE 30, 1912.

COUNTRIES OF ORIGIN.	Quantities in Gt. Hund.	DECLARED VALUES.	
		Game.	Poultry.
Russia.....	1,189,982	£421,829	
Denmark .....	342,589	£155,126	
Germany .....	31,126	£12,709	
Netherlands ...	70,514	£29,501	
France .....	67,409	£27,411	
Italy.....	67,262	£27,743	
Aust.-Hungary	28,448	£11,457	
Other countries	58,289	£15,107	
Totals .....			



## POULTRY COOKERY.

## COOKING OLD HENS.

If a fair amount of patience and skill is brought to bear on the above subject there is no reason at all why an old bird should not be rendered quite as dainty, and indeed more so, than many of the chickens which are regarded as being so very much superior; the flesh of the much despised old hen being, when properly prepared, decidedly firmer and richer in flavour than that of a younger bird. When badly cooked, of course, it is just the reverse, being exceedingly tough, hard, and almost tasteless. The following methods of preparing an old hen for table will, I know, give every satisfaction, and I hope readers of the *Poultry Record* will give them a personal test.

**MATELOTE OF FOWL:** Prepare the bird for cooking in the usual way, then place it in a saucepan of hot water and bring it to the boil just as slowly as possible, being careful to remove the scum as it rises to the surface. It is most essential that these points be strictly attended to as they go far towards rendering the flesh of the bird plump and white. When about three parts cooked, take up the bird, remove all fastenings, and when slightly cool divide it into small neat joints and pieces; season these pleasantly with salt, pepper and lemon juice and cover them over in a cool place until required. Put two ounces of fresh butter and one ounce of flour into a stewpan and stir them well over a moderate heat until nicely browned, then add a dozen small onions blanched and peeled, the red part of two medium sized carrots cut in julienne strips, a bunch of mixed herbs tied together very securely, a quarter of a pint of claret, a seasoning of salt and pepper, and half a pint of rich well-flavoured brown sauce. Bring to the boil, then add the prepared fowl and simmer gently until the latter is quite cooked and the vegetables sufficiently soft, adding a little more sauce or good brown stock if necessary. When done enough, dish up the fowl in neat order on a hot dish, arrange the vegetables round about, pour the sauce—which should be quite thick and creamy—over all, and send to table as quickly as possible.

**BRAISED FOWL:** Prepare and partially cook the bird as directed above, then put the joints into a stewpan containing two or three ounces of hot butter, or pure beef dripping, and keep turning them about over a brisk fire until well browned in every part; then add half a pint of brown stock thickened with roux, half-a-dozen medium sized fresh tomatoes cut in quarters, two tablespoonfuls of finely minced onion, a seasoning of salt and pepper, a bunch of savoury herbs, a score of fresh, carefully prepared button mushrooms, and the strained juice of a small lemon; stir gently until the various items are well mixed, then cover closely and stew very slowly until the cooking is satisfactorily finished, after which dish up as follows: Arrange a flat bed of well-mashed and pleasantly seasoned potatoes on a sufficiently large, well heated

dish, and upon this pile up neatly the joints of fowl; pour the sauce over so as to entirely cover the whole, garnish the edge of the dish with daintily curled bacon and hot hard-boiled eggs cut in quarters and arranged alternately, and serve very hot. Be careful to remove the bunch of herbs before using the sauce.

**FOWL EN CASSEROLE:** Have ready a deep earthenware dish with a tightly fitting lid and cover the bottom of it with a thick layer of sliced onions and tomatoes; season these pleasantly with salt and pepper, fresh lemon juice, and mixed herb powder, then add a layer of the fowl which has been properly prepared and cut up neatly; follow with another layer of onions, tomatoes, and seasoning, and so on until the dish is sufficiently full, then pour over about half a pint of good stock, fix the lid on, and cook in a moderate oven for about two hours, or longer if required. When done enough serve in the casserole with a neatly folded napkin pinned securely round about. If liked, a little good creamy sauce may be served separately, in which case tomato, mushroom, piquant or brown onion sauce are amongst the most suitable, but this, of course is merely a matter of individual taste and convenience.

**A FRENCH METHOD OF DRESSING:** Prepare the bird in the usual way, truss it as for roasting, and stuff it with some well made forcemeat, then boil very gently in pleasantly flavoured stock until nearly done enough. When this point has been reached, take it up and allow it to cool a little, then place it in a baking tin containing a generous supply of boiling fat, and after basting it thoroughly, finish the cooking in a well heated brisk oven, repeating the basting process frequently in order to render the flesh of the bird tender and prevent the danger of its becoming at all hard or dry. When done enough remove the fastenings and place the fowl on a well-heated dish; garnish round about with a ring of small, daintily fried sausages and sprigs of crisp pot parsley. Some well-made favourite sauce, or rich creamy brown gravy, should accompany this dish to table, also a couple of small fresh lemons neatly arranged in quarters on a small fancy dish paper.

**NOTE:** When the bird is really too ancient to be used according to any of the foregoing recipes it can always be utilised in the making of excellent and most nutritious soup, a delicacy which is very highly appreciated by the majority of people.

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### Irish Egg Laying Competition.

The Irish Department of Agriculture has decided to conduct an eleven months competition at the Agricultural Institute, Ballycolman, Strabane, commencing October 1st next. This will be limited to forty pens of six pullets each. Whether it is restricted to Irish competitors or British will be admitted is not stated. Particulars can be obtained of the superintendent at the above Institute.



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## THE HEAT OF HENS IN HATCHING.

Dr. Paechtner, in *Deutsche Landwirt-Schaftliche Presse*, records observations in measuring the temperatures which obtain when the eggs are being hatched naturally. He constructed a tin egg and placed in it three thermo-elements; the first, close to the top of the blunt end; the second, in the middle; and the third about 1 cm., or 0.4 in., from the pointed end. The rest of the egg was filled with aluminium powder and melted paraffin, whose specific warmth is about that of egg albumen.

This egg was placed among other real ones, under a hen and afterwards under a turkeyhen and securely fastened. The thermo-elements were connected with the measuring instruments by conducting wires.

With the hen the tin egg showed temperatures of 38°-39° C. (100.4°-102.2° F.) and in the intervals, when she left the nest, the lowest temperature marked was 30.05° C. (86.09° F.). With the turkey-hen the temperature of the tin egg varied from 35.28° C. (95.5° F.) to 39.08° C. (102.34° F.), and twice, while she was away, the temperatures marked 21.14° C. (70.05° F.) and 24.24° C. (75.63° F.).

The experiments showed also that the temperatures of hens' eggs, while the hen is sitting, depend on their position whether they are on the edge or in the middle of the nest; and that the hen makes constant efforts with her feet to change the position of the eggs. A transient lowering of the temperature down to 21°C. (69.8° F.) does no harm. All the fertilized eggs under the turkey-hen were hatched.

## Mosquitos and Warts on Poultry.

At this time of the year fowls, more particularly young chickens, are troubled with blisters on the face, which are usually ascribed to warts. These excrescences spread rapidly, and the affected bird becomes a sorry sight. Its eyes get bunged up, and the warts make an inward cankerous growth. The result is that many valuable young birds are placed under the sod.

Most authorities on poultry diseases claim that warts come from the blood being out of order. But there are not a few sceptics who dissent from this diagnosis. One of them, Mr. W. E. Boutcher, of Canterbury, N.S.W., contends that the so-called warts come only in the mosquito season, and that they are caused by the bites of that insect. His theory is the result of experiments with two separate clutches of chickens of the same age. One lot went to roost in the ordinary way in an open fowl-house. Inspection at night by candle-light disclosed the fact that mosquitoes were attacking the birds. The irritation made the chickens scratch their heads and inflammation and warts set in.

The second lot of fowls were thoroughly protected at nightfall by mosquito-proof nets. The result was complete immunity from wart trouble. Mr. Boutcher's experiment coincides exactly with one made by the late Mr. Gilbert Murdoch, who never lost a bird that was protected from mosquitoes.

Wart ointment, which is procurable from most city poultry stores, gets rid of the trouble if applied at an early stage of the attack. The chief component parts of the ointment are sulphur and lard.—*Sydney Mail*.

## Might have been better said.

One of our American contemporaries is sad because the physician in chief of one of the Illinois State Lunatic Asylums wants to equip a poultry plant, saying that "poultry keeping seems to be a line of work for which the inmates of this institute are particularly fitted." What the good man meant was that poultry keeping was a useful occupation for the inmates, as has been proved at several institutions in this country.

## The Table Poultry Club.

At a largely attended meeting held at the Sussex Agricultural Society's Show, at Hove, on July 18th, in the tent adjoining the poultry section, kindly lent by Mr. S. C. Sharpe, who presided, it was unanimously resolved that The Table Poultry Club be formed forthwith to carry out the scheme proposed by the provisional committee, and submitted to the Utility Poultry Club and approved.

The following committee was appointed:—Messrs John Ade, Frank Beszant, E. Druce (Bedford Agr. Col.), W. M. Elkington, I. Godwin Edwards, Percy A. Farrer, A. J. Falkinstein, J. H. Gilbert, E. G. Grant, J. W. Hurst, A. H. Johnson, Edwin Russell (Midland Agr. Col.), S. C. Sharpe (Cuckfield Agr. Col.), and Ernest Widdows. Mr. Wm. Henfrey was appointed Hon. Secretary and Treasurer. The minimum subscription was fixed at 2s. 6d. per annum, Vice-Presidents a guinea, and Life Members three guineas.

The objects of the club are very comprehensive, including the question of growing and fattening tests to ascertain what are the best breeds of fowls for table purposes—for quick maturity and for fattening; To arrange for better classification for table poultry at shows; revising the standard for dead poultry; appointing specialist judges who will judge by the standard; guaranteeing classes and offering specials; and by endeavouring to arrange special classification for professional fatteners, smallholders, cottagers, and tenant farmers.

The first annual meeting of the Club will be held at the Dairy Show, and in the meantime the Committee will draw up the rules for the Club, and make preliminary arrangements for conducting growing tests, so that by the spring of next year, it is hoped demonstrations would be given of various breeds.

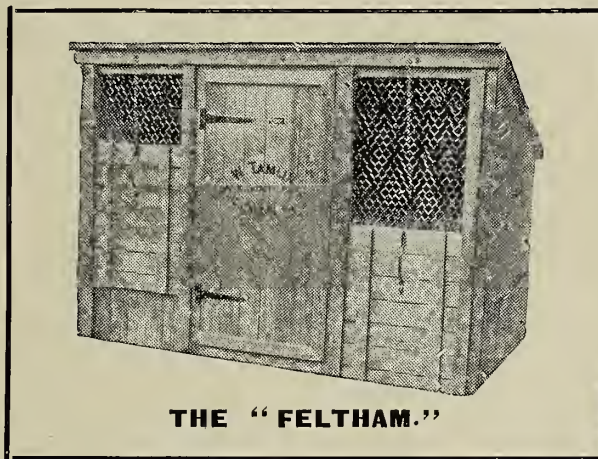
The Hon. Secretary's address is Mr. Wm. Henfrey, Bledlow Ridge, Stokenchurch, Bucks.



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## ITEMS OF THE MONTH.

## National Poultry Farms.

The prospectus which appears in our advertising pages speaks for itself, and in view of our own connexion with it, we would prefer not to recommend it in any way to our readers. We will, however, say this much, that having accepted the chairmanship of the company we have shown our confidence in the future of the business, and we have only accepted the position after the most exhaustive enquiries and thoroughly satisfying ourselves alike as to the past, present, and future.

## A POULTRY WORK OF PROVED EXCELLENCE.

Those of our readers who like to examine and prove an article before they buy it will appreciate the offer of the Waverley Book Company as set forth in our advertising columns this week.

Many will remember when this enterprising firm put the Encyclopaedia of Poultry on the market, supplying it at a price and on terms that made its possession possible even to people with very slender incomes. So widespread was the interest aroused that the complete edition was speedily exhausted—all but a very few copies—which are now offered for free approval to those who apply for them at once on these terms.

We advise every reader who is in want of a reliable and sound work of reference on Poultry matters to send off without delay for the two volumes of the Encyclopaedia of Poultry complete, to the Waverley Book Company Limited, 7 and 8, Old Bailey, London, E.C., for four days free examination.

At the end of that time they may send them back at the Publishers' expense if they think they are not likely to be useful. If they decide to order the work, they may do so by a first payment of one and sixpence, and promise of a few small monthly payments to complete the purchase while using the books. But as the copies now undisposed of are very few indeed—only a dozen or thereabouts in all—it is necessary to make application for a set for free approval at once.

## Mr. Tamlin's Exports.

The following is a list of Mr. W. Tamlin's exports for June, 1912: Two 60 egg incubators, two 100 incubators, two 30 ostrich incubators, to Algoa Bay, S. Africa, for Hayward, Young & Co.; one 100 egg incubator, to Mr. P. H. Dowell, Panama, S. America; twelve 30 egg, twelve 60, and twelve 100 egg incubators, three 60 and three 100 foster-mothers, to Mr. J. F. Marshall, Johannesburg, agent for the Transvaal; two 200 egg incubators, to Valparaiso, order of H. Bath and Son; one 60 egg incubator, one 60 foster-mother, to Valparaiso, order of Kirkland, Cope & Co.; two 100, two 60, and two 30 egg incubators, and six 60 foster-mothers, to Oakes & Co. Ltd. agents for Madras, India; one 100 and one 60 egg incubator, to Percy Clarke, Rio de Janeiro, S. America; one 60 egg incubator, one Surbiton poultry-house, to Mr. C. Temperley, Gibraltar; one 100 egg incubator, to Mr. T. E. Wilson, East London, South Africa; one 60 egg incubator and one 100 foster-mother, to Mr. S. Crosthwaite, Beira, Africa.

## OUR BOOK MARKET.

*Any of the following books will be supplied at the prices named. Cash must always accompany orders.*

**Amateur Poultry - Keeper.** By W. M. ELKINGTON. 120 pages. Fifteen illustrations. Price, 1/2 post free.

**Incubators and their Management.** By J. H. SUTCLIFFE. Fifth Edition. Illustrated. Price, post free, 1/2.

**Lett's Poultry - Keeper's Account Book.** Edited by LEWIS WRIGHT. Cr. 8vo. Post free in the United Kingdom, the Colonies, and foreign countries, 2/8.

**Poultry and Egg Raising at Home.** By W. M. ELKINGTON. Illustrated. Price, post free 1/2.

**Poultry Culture for Profit.** By Rev. T. W. STURGES, M.A. Third Edition. Cr. 8vo, 134 pages. Fully illustrated. Post free in the United Kingdom, the Colonies, and foreign countries, paper covers, 1/3; cloth, 1/9.

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